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INFLAMMATION OF THE GALL BLADDER

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The organ that demands the most attention in connection with inflammatory diseases of the bile tract area is the gall bladder, because it is the organ that bears the brunt of infection. The infection, like infectioin anywhere, produces inflammation that is circumscribed or extensive; mild or severe.

An inflammatory process terminates in either recovery of the affected area or the death of that area.

Leaving out recovery by delitescence in which there is an evanescent, fleeting, abortive infection, and which on account of its lack of symptoms, can not be identified in the hidden organs, there is left for consideration recovery by "resolution" and recovery by the formation of new tissue.

In recovery of an area involved in an inflammatory process by resolution, the infection is controlled, and the area involved returns to what appears to be a normal state. A typical example is recovery from lobar pneumonia, where, quoting McCallum, "it is rather as though the whole process were taking place upon a mucous surface."

In inflammatory processes involving mucous surfaces alone, recovery is by resolution. This is the so-called catarrhal type of inflammation in which there is hyperemia and oedema of the mucosa and excessive production of mucous.

It is conceivable that there might be a catarrhal inflammation of the bile tract area to a limited extent without involvement of the sub-mucous structures, and that such an inflammation might be followed by a return to a normal condition. So-called catarrhal jaundice still listed by writers on internal medicine seems to be such a process. Catarrhal jaundice is associated with duodenitis and inflammation of the mucous membrane of the terminal choledochus, with plugging of the opening of the choledochus by mucous.

In the recovery of an inflammation by formation of new tissue, there is fibrosis; there is scarring. But it is well known that pathology disclosed at operation or autopsy shows that an inflamed gall bladder does not always recover. In some cases the infection is vicious, the blood supply is destroyed and there is gangrene, disintegration and rupture. In some cases the cystic duct is obstructed and the gall bladder with inflamed walls is filled with pus. In some cases, there is rupture into the abdomen or a neighboring viscus. In some cases, the acute symptoms have subsided, but there is a slumbering infection.

The conditions said to recover by resolution—so-called catarrhal inflammations—should receive very careful consideration. They should receive careful consideration because of the obvious difficulty in determining clearly whether in a given case there is, or is not a simple catarrh.

We will agree, in order to be fair, that in so-called catarrhal jaundice in the young, associated with very moderate interference with the well being of the patient, the pathology consists in an inflammation of the duodenal mucosa and the mucosa of the pars intestinalis of the choledochus, but when inflammation involves the gall bladder mucosa there is, in my judgment, good reason to believe that it is not simple catarrh.

Ascending infections are, at most, extremely rare. As much as we at one time admired the theory of Gilbert, and, later, Naunyn about descending infections, we must now, in view of the work of Graham and others, regard such infections as rare. Concretely, it seems to have been demonstrated that surface infection of the bile tract area is very uncommon, because it has been shown conclusively that in the average case, the infection is carried to the gall bladder by lymph or blood vessels, and that it begins in the wall beneath

the mucosa. For practical purposes, then, it would seem that so-called catarrhal inflammation of the gall bladder has not been proven. On the contrary, it would seem that it has been proven that in the average case, at least, inflammation of the mucosa is secondary to a sub-mucosal infection.

If the infection is in the sub-mucous tissues, recovery of the area involved, if there is recovery, is by the formation of scar tissue. If there is scar tissue, there is more or less extensive crippling of the gall bladder. Moderate scarring interferes with the ability of the gall bladder to absorb water in the process of concentrating the bile and with the ability to empty itself. If the scarring is extensive, these functions will be destroyed. Not only are the functions crippled or destroyed, but often there are areas of dormant infection, so that the patient not only has a scarred and crippled gall bladder, but a gall bladder that has foci that may be the starting point of acute inflammatory processes later. In addition, such a gall bladder is predisposed to the development of malignant disease.

And there is still another danger—extensive involvement of the entire bile tract through the lymphatic distribution. It has been shown that there is a direct connection between the sentinel gland at the neck of the gall bladder and glands distributed along the choledochus. It is through this lymphatic connection that infection may be carried from the gall bladder area to the tissues about the choledochus, producing a periductile inflammation.

In this way—that is, by the secondary involvement of the choledochus—there may be scarring, contractions and narrowing to the extent that the bile stream in the choledochus is obstructed and jaundice produced, even when no stones are in the duct.

Many years ago, we operated upon a woman about 50 years of age. She came with a pronounced, long-standing jaundice and a history indicative of inflammatory disease of the bile tract area. Pain and digestive disturbances were prominent symptoms. The reasonable conclusion was that there was an obstruction of the choledochus by stone. At operation, there was no evidence of stones in the duct. The gall bladder had been changed into a firm flesh-like mass buried in scar tissue. There was no demonstrable cavity. The cystic duct was patent for a little over a centimetre. After the removal of the remains of the gall bladder, a small catheter was sutured into the cystic duct.

At that time, I believed that there was a permanent stricture of the choledochus due to extensive and long-standing inflammation of its walls, and it was expected that there would be a permanent biliary fistula, but several weeks after operation there was bile in the feces, and less bile per fistula. Within two months there was no bile per fistula. There was bile in the feces. There had been no return of jaundice. The patient was observed for five years. She was not entirely well during that time. There were intermittent digestive disturbances and occasional distress, but in the main, her condition was a great deal better. There was no return of the jaundice.

In this case, it is possible that a stone was overlooked and that subsequently bile found its way around it, but I do not think so. I believe that the obstruction of choledochus was due to inflammatory narrowing with an associated swollen mucosa. Two things are in favor of this conclusion—the inability to find stone in duct at the time of operatioin, and the disappearance of the jaundice and improvement of the patient after operation.

If, in the case of this patient, relief did not follow the escape of a stone from choledochus, or the passage of bile around it (a very improbable explanation), what was it that brought about the relief of the jaundice and the improvement of the patient? Was it the drainage of the bile tract area by way of the cystic duct? In my judgment, that would hardly be the sole explanation. I believe that drainage did relieve the oedema of the mucosa, and in that way contributed to improvement, but I do not believe that it was solely responsible. Would it not appear reasonable that in removing the degenerated remains of the gall bladder, a source of infection that kept up a chronic inflammatory process in and about the choledochus by way of the lymphatic connections, was removed?

As I understand it, the following facts, in connection with infections of the bile tract area, have been demonstrated:

1. Simple surface infections of the mucosa—the so-called catarrhal inflammation—are extremely rare.

2. In the average case, the infection

begins in the wall of the gall bladder beneath the mucosa.

3. The most favorable non-operative result that can be expected after the average wall infection is pathologically a more or less extensive fibrosis that modifies or destroys the ability of the gall bladder to empty itself, or to concentrate bile by the absorption of water.

4. The areas of fibrosis in the gall bladder wall have relatively low resisting power, and predispose to subsequent attacks.

5. Infections of the gall bladder, if they do not immediately produce a disaster, commonly become chronic.

6. Infection favors the formation of stones which frequently bring about serious, and too often disastrous pathological conditions.

7. Malignancy of the bile tract area usually follows long standing infection.

Taking these facts into consideration, is it not reasonable to conclude that, other things being equal, the diseased gall bladder should be removed? This conclusion is all the more reasonable when it is remembered that, notwithstanding the functions attributed to it, it is not an organ essential to life or the well-being of the patient.

But other things are not always equal. For example, in acute empyema of the gall bladder with gangerous walls, it is probably not wise to undertake its removal, because of the danger of an overwhelming infection following the necessary dissection. Unfortunately, in just the case where the gall bladder is hopelessly crippled, and where it is a positive menace, we, in the interests of the immediate safety of the patient, have to make a compromise and leave it, depending upon drainage and the protection of adjacent areas by rubber dam or some other appropriate procedure. However, from such a case, we may learn this lession: *most of the acute and disastrous conditions of the bile tract area come only after former recognizable attacks when appropriate surgical operations for definite relief could have been carried out with relative safety.*

THE MYOCARDIUM

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THEORY

The myocardium furnishes the motive power for the arterial circulation. The heart is a two cycle force and suction pump that maintains the necessary excess of pressure in the aorta and pulmonary artery. The resiliency and elasticity of the arterial system prolongs the effect of systole by maintaining a steady, equal flow of blood through the capillary beds during diastole. The return of blood and lymph is largely by muscular contractions, changes of posture, and respiratory aspiration. The heart action is synchronized by a neuro muscular conduction system. The sino auricular node (pace maker) is enervated by fibers from the right vagus and the auriculo ventricular node by the left vagus. Various sympathetic and trophic nerves accompany the vessels and play a prominent part in cardiac enervation. The respective sides of the heart pump the same volume of blood, but the pressure in pulmonary circulation is decidedly less than in the systemic. The normal heart operates efficiently without using its reserve force except on occasion, e.g., excessive exercise necessitating the adjustment to changes in intra-cardiac volume or pressure. Increase of intra cardiac pressure stretches the musculature, augments the irritability and contractility, and increases the afferent impulses. Compensatory hypertrophy is initiated to preserve the circulatory equilibrium. Relative decompensation with dilatation supervenes when the reserve force is exhausted and adequate nutrition is lacking for further hypertrophy. The physiological limit is reached when the cavities do not empty in systole. Persistent, passive distention diminishes the tonus, and the volume of the respective cavities increase pari passu with necessity, but hypertrophy with dilatation attempts to further adjust a defective pump to a certain load.

The clinical questions that arise, must invariably center around the integrity of the myocardium and the urgency of the circulatory demands. I believe it is generally conceded that myocardial deficiency regardless of its pathogenesis produces identical clinical syndromes, and the variety or the extent of the pathology is not so material as its particular location. In-

flammation, degeneration, thrombi and reparative processes may co-exist, and cardiac fatalities have occurred without demonstrable gross post-mortem findings. Myocardial changes are not primary but invariably secondary to infections, intoxications, nutritional changes or mechanical defects.

Probably existence of myocardial pathology is an inference based on the clinical evidence of cardiac insufficiency, and to regard myocardial change as a disease is undesirable.

SYMPTOMS

Early symptoms are vague. Noticeable fatigue under the usual circumstances of living, or exhaustion greatly aggravated by any additional physical, mental or emotional exertion. Unexplainable indigestion may occur but is more related to over exertion than over indulgence of the table. Irritability, poor memory, or vertigo and emotional depression; various gradations of dyspnoea, with a tendency to lividity. Unusual increase in pulse rate on slight exercise. Slight evidence of edema of dependent type. Substernal pain or arrythmia.

The various types present an unusal kaleidoscope panorama:

(a) Congenital lesions: An intermixture of venous and arterial blood with cyanosis, increased red count and clubbed fingers.

(b) Rheumatic, chorea and tonsillitis group: present a history of infection and secondary endocarditis—look anemic and have high leukocytosis in febrile stage; with few subjective or objective symptoms save murmurs and septic phenomena, but are potentially dangerous because of the co-existing myocardial infiltration and valvular defects.

(c) Syphilitic—otherwise v i g o r o u s adults, without definite rheumatic history or preceding hypertension, insiduously develop substernal discomfort—referred pains—cardiac hypertrophy and Corrigan pulse.

(d) Hypertension—The common cardio-renal vascular group of the fourth to sixth decade is either accidentally recognized and without subjective symptoms, or per chance discovered in the pangs of angina pectoris vera presenting a statue like position and ashen facies. Or those eventually destined to become dyspnoeic, cyanotic and edematous, without exertion.

(e) Degenerations of involution—ordinarily present excessive omental fat, a moist eye and an unsteady hand—atheromatous vessels—a relatively low blood pressure—arrythmias, aversion to new adventures, a narrow outlook, obtunded memory and a persistent tendency to reminisce.

PHYSICAL SIGNS

Physical signs are most material in differentiating functional disturbances from definite organic diseases. Medical judgment depends primarily on accuracy of observation and common sense; secondarily on academic knowledge and intuition.

(a) Inspection, with patient stripped and good light, first survey the contour, thinking deformity from tumors, effusions, adhesions or rib angulation. Locate the apex, realizing displacement occurs in hypertrophy, dilatation, effusions or adhesions with lung retraction. The impulse is accentuated by goiter-neuroses, drugs or hypertrophy, and made less prominent from dilatation, effusions or edema of chest. The epigastrium pulsates, various tachycardias, aneurisym, tumors or stasis, e.g., liver, dilated right ventricle. Observe veins of the neck. Do they fill from above or below or pulsate at different rate from the apex beat?

(b) Palpation is used to confirm inspection—identifies friction rubs and discovers thrills.

(c) Percussion is largely a habit; gives less information here than elsewhere and is more or less valueless unless corroborated by the X-ray.

(d) Auscultation is valuable when based on a knowledge of normal tones. It is our most practical index concerning progressive changes that augur improvement or an advancing pathology. I desire at this time to dismiss valvular and functional murmurs with one statement, viz: Systolic murmurs accompanied by a thrill or diastolic murmurs are significant of structural changes in the heart or great vessels. The first sound (systolic) becomes relatively shorter and more snappy in character with myocardial damage. When it is scarcely distinguishable from the second sound (embrycardia—tic tac rythm) muscular tonus is at a low ebb.

By simultaneously palpating the carotid artery we readily recognize pulse deficit—extra systoles and pulsus alterans. An irregular irregularity identifies auricular

fibrillation, perhaps the most common and dreaded late complication or stage of myocardial disease.

Accentuation of the second aortic signifies abnormal arterial tension due to hypertrophy with hypertension pathology. Accentuation of the second pulmonic means obstruction of, or a reflux of blood in the pulmonary circulation. Should this sound become less marked, failure of the right ventricle is a rational inference, while reduplication bespeaks unequal tension in the auricles and is a doubly grave omen, if existing pulmonary pathology be the exciting cause.

CORROBORATION BY INSTRUMENTS OF PRECISION

Sphygmomanometer—During compensation, the systolic pressure measures the arterial tension necessary to successfully combat existing circulatory defects. Disproportionate high diastolic pressure is an added burden, inasmuch as the pulse pressure represents all the potential energy passed into the arteries by each cardiac cycle. Many factors produce fluctuations in blood pressure, but clinically the relative time consumed in re-adjustment after exercise seems to be proportional to the degree of cardiac fatigue. Persistent low systolic following a prolonged high pressure is significant of grave changes in the myocardium provided the subjective and objective symptoms become more manifest.

Congestion raises the venous pressure which theorectically at least precedes arterial hypertension. Normally all veins should appear empty in the recumbent position; when elevated, above the sternoclavicular junction.

Electrocardiograph—It does not serve as an index to specific myocardial pathology, but an electrocardiogram is decidedly of more than academic interest in testing the neuro-muscular conduction apparatus. It is capable of furnishing warning of probable myocardial damage by registering the variety and degree of cardiac block. Identifies the arrhythmia and on occasion might profitably be the deciding factor in questionable surgical risks. The records are serviceable for comparison in estimating progress of your case. It is a refinement in laboratory procedure, comparable to the value of the X-ray in incipient, pulmonary tuberculosis, since both are only capable of rendering service to the patient commensurate with the correctness of their reading.

PROGNOSIS

Experience teaches caution; the probable duration, or ultimate outcome is always uncertain. The functional status of the myocardium may be estimated by various exercise tolerance tests:

(a) Ability of holding breath. Note time consumed.

(b) Increased pulse rate should not be over 20 per minute on assuming the upright position in cases convalescing from infectious processes, e.g., diphtheria.

(c) Unusual fatigue experienced following regular duties.

(d) Moderate exercise increases the pulse rate, but it should not continue at over four per minute extra, after a two minute rest.

(e) More prolonged exercise in grave cases may tend to slow the rate and register a fall of blood pressure.

Numerous other standards are advocated but they of necessity are all relative and depend on the personal equation of both the patient and physician.

If we always remember that myocardial changes are secondary and not a disease entity, then look carefully into the existence of correlated and co-existent pathology along with laboratory evidences of functional disturbances, the more likely we will interpret findings correctly, and thus be in a position to advise rational management.

PROPHYLAXIS

Prophylaxis rests largely with better education of both the profession and the public. Periodic health examinations, supervised, preferably, by competent general practitioners instead of clinics. The supplying of an opinion is valuable only in proportion to its being understood and followed upon rational lines. Distant clinics may use excellent scientific methods for diagnosis, but after all, unless the individual has a physician conversant with their living conditions and interested personally in their problems, the chances of successfully negotiating the detour is doubtful. Present medical knowledge fails in its general application and maximum benefits, largely because the practice is already over-specialized and as a result, what has unnecessarily become group bus-

iness, is as a matter of fact, no one's direct responsibility.

TREATMENT

There is no specific, combination of remedies or plan that will always forestall death. The ideal method is an endeavor to conserve the cardiac reserve. Avoid unnecessary exposure to infection. Take the time to educate your patients who possess potential possibilities and show a kindly interest by intelligent co-operation. Endeavor to inactivate the causeless wear and tear; secure sufficient sleep, insist on ideal hygiene, proper nourishment and adequate elimination. Maintain peace of mind and stimulate the will to live. Zealously watch your convalescents, graduate their exercise, and exhibit proper tonics on occasion. Trying to fight against the limitations fixed by dyspnoea or palpitation, is to court disaster. In short, the speed limit is being exceeded.

Drug therapy is a debatable subject. clinicians have taught and untaught the use of various stimulants. The safest course is to follow the consensus of opinion, but be consistent with physiological teaching. Stimulation must be through the sympathetic system and inhibition by virtue of the vagus. The respiratory center is regulated largely by the CO2 content of the blood. Caffeine sodium benzoate is the most potent emergency remedy. The respiratory muscles are also stimulated by strychnine and possibly alcohol. The vasomotor center is stimulated both chemically and reflexly.

Hydrotherapy is the most reliable vasomotor tonic, but adrenalin or pituitrin are excellent emergency remedies.

The cardio inhibitory center functions altogether through reflex stimulation, but atropine will paralyze the nerve endings, and pilocarpine stimulates.

In functional disturbances like palpitation we usually apply the ice bag exhibit NH4Br and carminatives, and are careful of the psychology, e.g., neurocirculatory asthenia.

Digitalis is dependable in decompensation regardless of the etiology, by slowing the rate, rest is secured and better nutrition results. By interfering with conduction, heart block may result. If the pulse rate falls to seventy per minute, it should be discontinued. Gastro-intestinal disturbances and lessened urinary output are toxic effects.

Quinidine sulphate depresses all cardiac functions and for this reason may be desirable, but only when the patient can be closely watched. Toxic action increases the ventricular rate. It is contra-indicated in congestive cases and where suspicion of emboli exists, e.g., hemoptysis or pleurisy, because if the irregularity suddenly ceases, the resultant stronger systolic action may readily dislodge cardiac thrombi.

Morphine depresses the medullary centers and the reflex arcs. It allays the effect of excessive stimulation and by securing sleep, over-balances the theoretical evils. In fact, loss of sleep kills more rapidly than starvation. Intravenous glucose is ideal in starvation acidosis.

Paraldehyde is the least depressing hypnotic, but chloral hydrate, bromides and barbital may be necessary.

Nitrate groups are desirable symptomatic remedies for anginal pain, or cardiac asthma, but have a fleeting action, and are not to be classified as curative remedies.

Special symptoms are treated along rational lines according to their etiology and with due cognizance of the individual's peculiarities and particular needs: e.g., carefully consider his emotions, sub-conscious fear, or any temperamental over-acute sensation.

ARTHRITIS AND RHEUMATOID CONDITIONS

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Arthritis is a diseased condition characterized by disability and structural changes in one or more joints. It has been the cause of suffering in man from time immemorial. It was the disease par excellence of the Egyptians.

Today it is one of the great scourges of society. This is well exemplified by the great number of institutions and cures for the treatment of this disease that are scattered throughout the world. This disease occurs from youth to old age, and has been classified by Cecil into the acute arthritis which includes the infectious and non-infectious; chronic arthritis which includes the infectious or proliferative type, and the degenerative or osteo-arthritis,

the metabolic type, the mixed forms of chronic arthritis and spondylitis.

The extent of arthritis, and the prominence it assumes as an economic problem is just beginning to be appreciated. The medical profession of twenty-four countries, including the United States have lent their support through the co-operation of representative men in the study of rheumatism being carried out by the international committee on rheumatism, their headquarters being at New Amsterdam. England, France, Sweden, Holland, and America have been especially interested in this problem.

In America this intensive attack upon the problem of arthritis is being lead by Dr. Louis B. Wilson, director of Mayo foundation who is assisted by a great number of leaders in our profession. In Sweden, Dr. Ellen Persson states that 20 percent of the invalid cases under sixty years of age are referable to arthritis, as against 9 percent due to tuberculosis. In England the Brittish Ministry of Health reports that rheumatism causes nearly one-sixth of the total industrial disability, with an estimated expenditure of two million pounds for sick benefit, and a loss of three million weeks of work. In Germany Dr. Arnold Zimmer of the University Surgical Clinic in Berlin, states that there are 8.2 times as many cases of rheumatism of joints and muscles as tubercular infections; 3.4 times as many days of illness, and 1.4 as much invalidism.

In the study of arthritis in the army it was found ten times as frequent as diabetes. Similar evidence of a growing appreciation of the problem could be multiplied. This suffices to point out the importance of the disease of articular and nonarticular rheumatism as a major economic problem in the working class today.

There is a growing tendency among the laymen to assume that all disability is due or related to trauma, and that diseased process have no bearing upon their physical assets.

The two great classes into which adult chronic arthritis is conveniently divided is not entirely satisfactory, but at the present state of our knowledge it is the best scientific classification that we could expect. The atrophic, proliferative, or rheumatoid on one hand, and the hypertrophic or degenerative type on the other gives us a good working plan on which to make a diagnosis, although we realize that there is a certain over-lapping in both of these types.

The frequent recourse to X-ray examination, especially that of the spine, has been of especial enlightenment to us, as to the great frequency of arthritis in the spine. As result of the X-ray evidence we have been impressed with the increasing number of cases of arthritis of the spine in younger adults. Many of this latter class may be wholly unaware of any disease of the spine, and if found after minor injury to the back it is too often assessed to trauma, the disease having been present but unrecognized before the purported strain. Some employers realizing the frequency and seriousness of this condition have demanded an X-ray of the back of every employee before permitting them to enter their service.

In the routine examination of industrial cases, who make claim for compensation, one is frequently confronted with a problem of arthritis. Probably the hardest nuts to crack are the spondylarthritis that occur in workmen that have sustained an injury and the X-ray of the spine presents an array of calcified ligaments, spur formation, and osteoarthritis, that originated months and years previously. The patient maintaining that the foci of infection, age, and existing pathology have no bearing on his symptoms.

Other joints besides the spine are frequent sources of medico-legal interest. I will briefly summarize two of these latter type. I think that they emphasize the importance of bearing in mind the relationship of disease as well as that of trauma to arthritis. This honest differentiation is as I see it, part of the physician's duty and should not be assumed by the layman.

CASE REPORTS

Case 1—Male, 45 years of age, whose previous history was irrelevant. While pursuing the usual labor of a workman he noticed a pain in his left wrist. He states that he does not know of any injury that he sustained, but his wrist began to pain him, and that he must have hurt it. He was seen twenty-four hours after the pain began, and his left lower forearm, wrist, and hand were swollen, painful to movement or palpation, temperature 101, and the distress in the wrist was quite marked. Examination showed a marked infection of his gums and several carious teeth. He was told that his disability was due to an inflammatory rheumatoid condition and

was not of a traumatic nature. He was sent to a dentist who extracted several teeth and treated his oral sepsis. His disability gradually cleared up and left him with 20 to 25 percent impairment of function of the joint. X-ray of the joint was negative as to bony lesion. He applied to the Industrial Commission for an award for his disability and on the evidence such as I have given above was awarded six hundred seventy-seven dollars.

Case 2—Male, 31 years; patient states that while lifting, his hand slipped off of the article he was holding and he felt pain in his wrist. He stated that he had had a urethral discharge for ten days previous to the accident. Rectal examination showed a distended right vesicle and examination of the discharge showed numerous intracellular and extracellular gram negative diplococci. When seen a year later, he had an ankylosed wrist with full function of the fingers. The history and physical examination impressed me as being a pure type of a Neisserian arthritis. I was unable to visualize any evidence of trauma in his disability. X-ray was negative as to bony lesion. He appealed to the Industrial Commission for an award for his disability, attributing it as result of trauma and is at present under consideration.

The problem of arthritis not only includes the study of the etiology and the treatment of arthritis, but also the education of the layman in regard to the cause and frequency of it.

THE STANDARD TREATMENT OF FRACTURES

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The treatment of fractures is a phase of the physician's practice in which the remuneration is comparatively small, and the hazard to his reputation is great, yet a responsibility in which it is not expedient for him to avoid.

The great increase of insurance claims and the settlement of industrial claims before the industrial commission have been predominating factors in the exposing of unfavorable results in fracture cases. In a great many instances there seems to be an attitude of indifference and failure to follow principles of treatment that have been proven of standard effectiveness. No longer is it possible to mask bad results and it behooves one who cares for fractures to qualify himself just as thoroughly in this work as he would prepare for major surgery. Shortening, deformity, and ankylosis are now measured in dollars and cents, in claims of definite amounts through hearings open to the public.

Satisfactory final results can be obtained only through careful preparation and equipment necessary for the care of such cases, and through persistent, almost constant attention to mechanical details. Splinting must be efficiently and effectively applied and maintained. Thorough knowledge of what is satisfactory reduction of fragments and what is unsatisfactory is very essential. Relentless aftercare must be provided and the case kept under observation until there is unquestionably solid, bony union.

A majority of fracture cases are comparatively simple and results are obtained with little effort. Sooner or later, however, the case arises which results in grief and no amount of remuneration can pay for the anxiety and unappreciated efforts of the physician.

There is no mediocre standard for treating fractures. Perfect restoration of alignment, apposition and function cannot always be obtained. However, he who expects to assume the responsibility of treating fractures should know the prognosis of fracture cases and their complications and fully be aware of the limitations and disappointments that are likely to arise under various circumstances.

The first essential is to have an intelligent working knowledge of the case in hand. X-ray should be used in all cases. The guiding principle in the treatment of fractures should be to restore anatomical relationship as nearly as possible by whatever means that seem most effective, checking the alignment and apposition frequently by means of the X-ray. There are no fixed rules because the same conditions seldom arise in cases of the same nature. Standard general principles, however, have been evolved in regard to splinting and position of parts and these standards have become so well established that to omit or disregard them is considered a reflection upon one's intelligence and ability as a surgeon. Much of the material on fractures in text books, of ten years past, is obsolete and should be dis-

regarded. The latest text books on fractures are reliable.

Some of the more important standard rules are outlined here:

FRACTURE OF NECK OF HUMERUS

1. Use X-ray at once definitely to distinguish between dislocation and fracture and to determine position and nature of fracture.

2. Reduce as early as possible. Do not wait for swelling to go down.

3. Two methods may be used:

a. Without anesthetic. Place in bed and apply overhead suspension. Place extension on elbow in horizontal plane of body with shoulder in full abduction and with the elbow flexed and suspended by traction in vertical position.

b. With anesthetic. Reduce under fluoroscope, apply plaster cast with arm in full abduction and elbow at right angle. In some cases external rotation of humerus will be necessary. Abduction splints may be used instead of cast but fixation is not so satisfactory.

4. Position of fragments must be inspected by fluoroscope or X-ray. After two weeks their position cannot be changed.

5. The abducted position should be retained for at least four or five weeks. Relaxation sooner will cause change of position and limitation of abduction because of adhesions.

6. Massage to the shoulder is of great aid and should be started on the fifth day if not in cast. When cast is removed, massage and passive motion is of great aid.

COMPLICATIONS

1. Fracture may be accompanied by dislocation. Failure to reduce dislocation produces severe disability. Anesthetic is necessary to reduction. Treatment is then the same as for fracture.

2. Paralysis of circumflex nerve occasionally occurs and produces severe permanent disability if arm not retained in abduction until function of deltoid returns.

3. Treatment with arm to the side is likely to produce permanent disability of limitation of abduction and rotation.

4. Improperly applied splints may press upon the musculo-spiral at ulnar nerves and produce paralysis of severe nature.

FRACTURE NECK OF FEMUR

Use X-ray to determine whether intracapsular through neck or extra-capsular through base of neck and intertrochanteric.

a. Intra-capsular.

1. If of strong vitality and under 65 use anesthetic, reduction and apply plaster spica from axilla to toes on injured side and down to knee of well leg. Position should be full abduction, extension and internal rotation as described by Whitman. Immobilize 12 to 15 weeks. Weight bearing after 6 to 8 months.

2. Over age 65 or where feeble give no anesthetic. Use traction with leg in abduction extension and internal rotation. (An especially designed traction frame is used at the Reconstruction Hospital, but the Ruth method or overhead extension is very efficient.

b. Extra-capsular.

1. If of strong vitality give anesthetic, reduce and apply plaster spica from axilla to toes in position of slight abduction. Immobilize 8 weeks, allow weight bearing 4 to 6 months.

2. If feeble give no anesthetic and apply traction with leg in slight abduction.

COMPLICATIONS

1. Non-union occurs from insufficient and too short a period of immobilization.

2. Abduction deformity is very disabling because of functional shortening. Fixation in full abduction prevents this.

3. Stiffness of knee is disabling and can be prevented by using efficient traction and suspension method instead of plaster.

COLLES FRACTURE

1. Use X-ray to determine extent of deformity and displacement. Make certain that X-ray is made exactly in lateral and antero-posterior planes.

2. Always use anesthetic.

3. Reduce thoroughly so that articular face of radius points slightly downward and forward of the axis of the shaft.

4. Use molded plaster splints from elbow to knuckles with wrist in flexion and abduction to ulnar side.

5. Use X-ray after reduction.

6. Start massage at end of 10 days.

7. Remove splints in two to three weeks.

SUPRA CONDYLAR FRACTURE OF ELBOW IN CHILDREN

1. Use X-ray in lateral and antero-posterior position to determine displacement.

2. Always use anesthetic.

3. Reduce thoroughly. Exaggerate deformity, push lower fragments forcibly downward and while traction is being made on forearm, force lower fragment forward and at same time have assistant bring the forearm into acute flexion.

4. Check reduction with exact lateral X-ray views of humerus. Nothing short of complete reduction is satisfactory.

5. Bandage in acute flexion but not too tightly. Be certain to see the case daily for the first three or four days and if circulation is badly impeded, loosen bandage and relax flexion cautiously. Use heat constantly, also massage.

6. Bring forearm to right angle at the end of 18 days.

7. Start function and forced motion after three weeks.

POTT'S FRACTURE

1. X-ray to determine posterior and lateral displacement. Do not mistake for inversion fracture of inner malleolus.

2. Always use anesthetic.

3. Reduce by forcing foot forward and inward.

4. Check reduction with lateral and antero-posterior views. Normal alignment must be accurately obtained.

5. Apply plaster from toes to above knee. Foot inverted inward and fully dorsi-flexed.

6. Bivalve cast and start massage at the end of two weeks. Allow weight bearing at end of three weeks.

FEMUR

1. X-ray lateral and antero-posterior position.

2. Use anesthetic. Reduce completely and apply plaster spica if fracture is transverse and if fragments will become firmly engaged end to end.

3. Apply traction with or without anesthetic. Thomas splint, plaster trough, or ice tongs may be used. The ice-tong method is usually the more efficient.

4. Open operation is very seldom necessary in adults. It is very rarely necessary in children under 15 years old.

5. Retain traction four to five weeks. Retain fixation nine to twelve weeks.

6. Apply walking caliper at end of twelve weeks and retain until union is unquestionably firm.

WHAT IS CONSIDERED GOOD REDUCTION OF A FRACTURE: PROGNOSIS

I. FEMUR.

a. Childhood under 14.

1. One inch overlapping will regenerate to normal length in two years.

a. Bowing is likely to remain permanent.

b. Infection from compound fracture usually clears up promptly with adequate drainage.

2. Neck of femur must obtain complete reduction in extreme abduction and internal rotation.

3. Condyles: Obtain complete reduction and alignment on account of interference of weight bearing.

b. Adults.

1. Shaft

a. Over one-half inch shortening produces a permanently noticeable limp. One inch is not severely crippling; two inches gives severe permanent disability.

b. Bowing will remain permanent.

c. Rotation deformity produces faulty weight bearing.

d. Infection from compound fractures may result in non-union and persistent chronic osteomyelitis.

e. Non-union may occur from frequent adjustment of fragments.

2. Neck of femur:

a. Intra-capsular. Contour and normal angle of neck must be restored, otherwise non-union and shortening will produce severe permanent disability.

b. Intertrochanteric. Union will occur even when poorly reduced. Severe permanent disability follows poor alignment.

3. Condyles. Obtain complete reduction and alignment on account of interference of weight bearing.

II. HUMERUS:

a. Childhood.

1. Shaft.

a. One inch overlapping will produce no permanent disability or shortening, unless it involves the musculo-spiral nerve.

b. Bowing will usually correct itself.

c. Infection usually clears up promptly with adequate drainage.

d. Non-unon may occur from frequent adjustment of fragments.

2. Surgcal Neck.

a. Poor alignment does not greatly impair function.

3. Condyles.

a. Very slight misplacement of fragments produces permanent disability and deformity.

b. Stiffness for three to six months follows even well reduced fractures of elbow joints in children, but ultimately complete function returns.

c. Ulnar nerve complication is serious.

d. Ischemic paralysis is severely crippling.

b. Adults.

1. Shaft.

a. One inch overlapping will not interfere greatly with function unless it involves the musculo-spiral nerve.

b. Bowing will remain permanent.

c. Infections may result in non-union and many years of osteomyelitis.

d. Deformity may occur if not protected by bracing for several weeks

2. Surgical neck.

a. Improper alignment and incomplete reduction greatly impair function.

b. Circumflex nerve paralysis results in serious disability from loss of abduction.

c. Fracture of tuberosity and rupture of capsule and supraspinatus muscle results in loss of abduction and persistent pain in the shoulder.

3. Condyles.

a. Permanent stiffness of some degree always follows fracture into the elbow joint of an adult, even when well reduced.

b. Perfect reduction must be obtained even if open reduction is necessary.

c. Ulnar nerve paralysis is a serious complication.

III FOREARM:

1. Shaft.

a. One inch overlapping produces very little impairment of function if the bones are well healed while in full supination.

b. Bowing is permanent and interferes greatly with function of flexors and extensors.

c. Union of fragments while held in semi-pronation re-

sults in permanent loss of function and strength.

d. Non-union may occur from frequent adjustment of fragments.

2. Olecranon process. Disability will follow, unless completely reduced.

3. Head of radius. Permanent disability will occur unless well reduced. Poor reduction is preferable to removal in children. Removal in adults preferable to poor reduction, as comparatively little loss of function results.

IV. WRIST:

a. Colles fracture must be thoroughly reduced and normal alignment restored, otherwise permanent weakness and unsightly deformity will result.

b. In adults splinting for more than three weeks may result in permanent stiffness of the hand and fingers.

c. In children, fractures near the wrist do not result in permanent disability, unless rededuction is usually incomplete.

V. LOWER LEG:

1. Shaft.

a. One inch of shortening produces permanent limp. Under one inch is not severely crippling. Two inch shortening produces severe permanent disability.

b. Bowing will remain permanent in children or adults.

c. Infections may result in non-union and persistent chronic osteomyelitis.

d. Non-union may result from frequent adjustment of fragments.

2. Upper End to Tibia.

a. Poor alingment will result in faulty weight bearing.

b. Fractures into knee joint usually leave permanent limitation of motion.

3. Crucial Tubercle.

a. If thoroughly reduced will unite and with no permanent disability.

b. If unreduced, better be removed.

4. Lower end.

a. Must be thoroughly reduced and normal alignment restored, otherwise faulty weight weight bearing will be greatly disabling.

b. Splinting for more than six weeks may produce severe osteo porosis of foot bones and prolonged disability.

COMMON ERRORS AND IMPROPER PROCEDURE IN TREATMENT OF FRACTURES

1. Failure fully to reduce and maintain apposition and alignment.

2. Splints or cast applied too short for fractures of shaft; splint joint above and below.

3. Frequent manipulation and changing of splints or cast. Constant traction should be used if there is a tendency to shortening.

4. Cast or splints too tight. Interference with capillary circulation for twenty-four hours will often produce persistent pain and perhaps ischemic paralysis.

5. Cast or splints applied without regard for position of joint.

6. Splinting of joints over too long a period of time.

7. Removal of splints without fully determining firm union.

8. Frequent meddling with wound in compound fractures. These can often be thoroughly cleansed with iodine and alcohol, sutured and treated as simple fractures.

9. Plating of compound fractures. This should never be done.

10. Plating of simple fractures under questionable aseptic operating room technic.

THE MEDICAL TREATMENT OF FRACTURES

E. GOLDFAIN, M.D.
OKLAHOMA CITY

Complete surgical reduction of a fracture does not always insure prompt and satisfactory results. Thorough physical examinations and laboratory study of the patient are necessary and important, in order that any evidence of disease or constitutional weakness which is present be ascertained and corrected as far as possi-

ble, because they influence the character and rate of physiological repair of the damaged parts.

Prompt and thorough treatment of constitutional conditions found to be present will often shorten the disability period by preventing such complications as:

1. Fibrositis and ankylosis
2. Neuritis
3. Synovitis
4. Traumatic arthritis
5. Delayed or non-union

Diseased states that, when present, tend to lengthen the period of disability are:

1. Focal infection
2. Diabetes
3. General syphilis
4. Syphilis of the nervous system, especially Tabes Dorsalis
5. Malaria
6. Endocrine disturbances
7. Arterio sclerosis
8. Anemia
9. Tuberculosis
10. Affections of the genito urinary tract

Another factor to be seriously considered is that of diet. It is most important in the hospital case, in that there is a radical change in the patient's daily habits, activities and food which causes a physiologic reaction that affects healing of fractured bones.

His diet should furnish him an adequate amount of:

1. Mineral containing foods
2. Vitamins
3. Fluids
4. Proteins
5. Starches
6. Fats
7. Alkaline ash foods
8. Residue to prevent constipation

Milk products, residue containing cereals and bread, orange and lemon juices, salads of raw fruit and vegetables, green vegetables and rare steaks should be the basis of the diet.

In addition to the diet, as much sunlight as possible should be allowed the patient. Especially prepared cod liver oil super-fortified with vitamin D should be administered daily.

Treatment of the diseased states mentioned above is well known. Elimination of foci of infection and intensive treatment of rheumatic tendencies is very important. The urine is often an important guide to the patient's general condition. A trace of sugar should excite prompt attention to the diet. Indican also calls for dietetic regulation. A Wassermann should be taken routinely in all fracture cases. When positive, iodides, arsphenamine, bismuth and mercury must be administered in the most effective manner. Malaria is not uncommon and should receive the proper dose of quinine. The basal metabolism often indicates endocrine disturbance and glandular medication is helpful. For anemia the ingestion of liver and administration of iron and sodium caccodylate intramuscularly or by vein will serve to reduce or entirely remove the ill effects of this disease. Arteriosclerosis can often be retarded and improved by appropriate physiotherapy, iodides, the substitution of meats by milk and buttermilk and careful attention to the emunctories. Tuberculosis requires the maximum amount of rest, fresh air, and proper diet as set forth above.

DELAYED OR NON-UNION

In some cases, even though the patient has been properly treated medically and surgically, the fracture fails to heal. In these an altered blood chemistry is often found to be the causative factor.

Work done by various investigators has demonstrated that for fractures to unite actively the calcium and phosphorous content of the blood should contain 10.1 and 3.7 mgm. respectively per 100 cc. of blood. Their product should range between 35 and 40. Vitamin D should be supplied in the diet and by the administration of cod liver oil.

The medical regime set forth below is therefore advisable for delayed union cases:

1. High protein diet
2. Buttermilk, one pint daily
3. Orange juice daily
4. Calf's liver, three ounces thrice a week
5. Calcium carbonate grams three daily
6. Cod liver oil
7. Yellow phosphorous gr. 1/100 twice a day when non-union is especially refractory

The full beneficial effect of this treatment does not manifest itself for three weeks following its institution.

In order to secure a high protein diet the evening meal should contain meats in the form of liver, kidney, pancreas, brain, lung, heart or fish.

DIAGNOSTIC DISCREPANCIES*

ROY L. COCHRAN, M.D.
CADDO

Perhaps a president's address should not be too pointedly directed towards those subjects which are properly a part of the scientific program in a medical meeting but it seems to me that a judicious selection of the matter to be presented is fraught with considerable possibilities for the good of the society and the impression its membership should make on a discerning public. It is admitted that the public is far too inconsiderate in many ways concerning the work the physician does, both in the field of scientific accomplishment, and in the realm where the healing art is divested of pure science. In our efforts to keep abreast with the most recent advances in our profession we endeavor to give our patients a multiplicity of methods in diagnoses and treatments. This is well. We owe it to ourselves as physicians and even more so are we obligated to the individuals who come to us for help. To give them our best is poor enough. We should spare no means in our efforts to determine the nature and the extent of the pathology confronting us, the functional derangement presented, or the casual component, and the clinical whole in each type of patient with a disorder of any kind. Notwithstanding our varied means of investigation and observation and in spite of our most careful consideration of all the probable factors entering into the problem of correct diagnosis, we too often fail to find out just what is the matter with a patient.

Different authorities give various reports on the correctness of diagnoses in institutions where records are kept and autopsies are done. These records of our failures are available to the entire profession; it is a major problem calling for our own consideration and earnest effort. In this particular section of our state I have made a comparative study of a small number of patients. It is strikingly apparent that there must be some glaring lack of diagnostic acumen when a patient who has been seen by six different physicians all of whom belong to their respective county societies, has six different diseases assigned as the trouble. A second patient had five different diagnoses after consulting five different physicians who are representative men of the profession. In all the patients the pathology remains constant, the history is essentially faithfully given, and the symptoms fairly constant, yet the patient has a number of different disease entities assigned as the trouble. A satisfactory diagnosis to the physician should accord with reality, and later be confirmed with a degree of certainty in observing the progress of the case and the response to treatment. It should rightfully implicate all the data available from an examination of the patient, and the deductions arrived at in an appropriate plan of treatment. Furthermore it should involve with scrupulous exactness the very methods of reasoning which we all use too carelessly.

The four cardinal methods of physical examination are still as important and as fruitful of results in arriving at the "thing" that is the matter with the patient as they were a decade ago. A failure to use them in our examinations has shown a relative lack of importance from the viewpoint of the patient in favor of laboratory methods which is in my opinion due largely to our own indifference. This indifference has resulted in a steady drift of the sick to clinics in the larger centers of population. Or perhaps the patient becomes a devotee of some fad, or becomes the noisy exponent of some method of quackery.

Could we not profitably make a more careful study of the patient as an individual, give him a more thorough physical examination, elicit a more detailed group of symptoms, and more thoroughly investigate all the clinical assets of his case? In so doing we would be progressing towards an ideal which is certainly the basis of all logical and methodical treatment—a correct diagnosis. This progress would bring to the profession additional financial returns, sustain and increase public confidence in the physician, promote professional good feelings, and enlarge our sphere of usefulness and service.

*President's address, Southeastern Oklahoma Medical Association. Read at McAlester.

THE PUS APPENDIX
ITS TREATMENT AND AFTER CARE*

J. I. HOLLINGSWORTH, M.D.
WAURIKA

Mr. President, and Gentlemen:

You will wonder, no doubt, as to what I might add to the already worn out subject of pus conditions around the appendix, with its allied complications and rather appalling death rate. But I find very little in the text books or medical journals that gives one a very intimate insight into the management of a condition of this kind. About all they tell you is open and drain. Some say leave the appendix until another time, others say remove it by all means, and that about covers the subject.

Being situated in a community where the people are not educated to having surgical interference, and the doctors in some instances might tell them it might clear up this time, and not impress upon them the gravity of the situation, it falls to my lot then, to operate more of these conditions where pus has formed as to percentage of cases than those in larger centers where not only the doctors but the people appreciate the necessity of early interference.

I shall not take up your time in the diagnosis of these conditions, neither will I bore you with lengthy quotations, but rather wholly limit myself to the operation and after-care of the pus appendix and its complications as treated by us in the Waurika hospital.

In the first place we are confronted with a patient sick from four to ten days, usually dehydrated, suffering from acidosis, vomiting, with more or less shock from toxemia and pain. Pulse rapid, increased W.B.C., with a pronounced leukocytosis, lessened kidney output; in other words a poisoned patient from his own fluids.

If time permits we try to balance the fluidity of the body before operation. If not immediately after, before, we give fifty to seventy-five c.c.s of glucose intravenously, hypertonic salt solution either by hyperdermoclysis, proctoclysis, intravenous or by mouth. After, on the table, before the patient awakens, we use one quart of from one, two or three percent salt solution with five percent glucose per rectum which is very rarely expelled and assists very materially in the patient's well-being immediately following operation by eliminating post-operative thirst as well as combatting shock. Little fluids are given by mouth the first twenty-four hours and that usually being warm water. It seems to be poorly taken up and only balloons up the stomach and adds to the discomfort of the patient as well as assists in the production of an angulation or ileus necessitating repeated lavages (which should be done in these conditions) should the condition be satisfactory. We then give orange juice sweetened with glucose and water, only, the first three days, with on and off proctoclysis during the whole time, especially if the patient is moribund, or too young to appreciate his condition, which also eliminates, in most cases, the necessity of a purge the first few days. It is necessary to make a longer incision than in the clean cases, for the application of proper drainage, the placing of which is of as much importance as any other step in the operation.

The placement of the mesenteric attachments of the small intestines to the posterior abdominal wall are such that, given conditions necessitate different placements of drainage. For instance, a case with free pus in the abdominal cavity, not walled off, one must not only drain the pelvis, the retrocecal fossa, the fossa to the right of the ascending colon, but must push the small intestines to the left of the ascending colon and place a drain here, as the mesentery of the ileum partially walls this off from the pelvic cavity. and with this and Fowler's position we not only drain the upper abdomen potent in absorbent possibilities, but carry the septic material to the pelvis much less susceptible to infection and absorption.

Just sticking a drain of any size, or at any place, does not drain the cavity, and remember the size and number has all to do with the proper elimination of the infection. I use cigarette drains exclusively and of various lengths and sizes. Cases that are walled off from the free abdominal cavity should be packed full of these drains and not removed in from three to five days and then packed with gauze strips. The use of ether, mercurochrome, metaphen or hexylresorcinol is left to the judgment of the champions of these rem-

*Read before the Southern Oklahoma Medical Society, Duncan, December 19, 1929.

edies. I have used them all and find one about as good as another.

Here a condition arises—that of a fistulous opening in from one to five days after operation. The size, location and condition of the bowel giving one some idea as to its ultimate outcome. If the opening is on the under-side of the colon or outer-side, it will probably close itself, but if near the ileocecal valve, on top or end of the colon, it is less likely to close, which brings on our first complication. This condition is treated as any other pus drainage case until it is firmly walled off from the cavity of the abdomen. Then solid food is administered and patient gotten out of bed as soon as possible, home for one or two months, or long enough to see that it will not close itself. The patient has had time to build up, the infection is limited and he is in much better shape for repair. Fecal fistulae heal quicker with solid food than with liquids. Sometimes a loop of bowel, usually the ileum is engrossed in the wall of the abscess cavity, becomes gangrenous and actually comes in two. I have had a few cases of this kind, where all the fecal matter came through the wound, and the separated bowel was some eighteen inches away from the colon. These cases must not be operated too early, build them up by all means. At least two months, better three, should supervene between operations if one expects a successful outcome. Then one may do an end to end anastomosis, Murphy button or what have you, without much fear of infection. I usually cut out the scar and close the wound as in a clean case, with the exception of a small rubber tissue drain in the corner of the wound for the first few days.

The thing that will eventually be done in these conditions where the abscess cavity or the gangrene involves the colon alone, walls are thinned out and a fistulae looks inevitable, is to open the colon at a healthy place, introduce a large tube into the ileocecal valve, drain all fecal matter outside the wound, give the colon a rest, and in a few days repair the colon without a fistulae forming.

Angulation and ileus are best treated by not having them, or prevention, which consists of not too much water by mouth the first two days, constant bowel irrigation with salt solution, with or without glucose as Murphy drip. A jejunostomy or ileostomy before peristalsis ceases as it does no good after, and last but not least, a too tight adhesive band across the abdomen to hold the dressing.

Don't be in too big a hurry to give a purge after these operations. I have seen cases where I believe fistulae, angulation or ileus would not have occurred should the oft two ounces of castor oil on the proverbial third morning not been given, and the attendant relied on irrigation for his elimination. Some one said "splint the bowel with morphine." And one readily should for the first three days, giving the almost devitalized tissue time to recuperate. I find little use for drug stimulation in these cases, as the salt and glucose seems to supply this. In exceedingly grave cases I use camphor in oil, three grains every three or four hours, deep in the muscle. In the female patient the drain should extend to the botton of Douglas's pouch. All complications of tubes and ovaries are treated as indications demand.

In conclusion, we must remember that the immediate after-care in these cases rises or lowers our mortality in proportion to our efforts to carry our case to a successful termination. In a good number of over a hundred cases in the last three years the writer has a mortality of less than eight percent from all causes. I always remove the appendix. I have no argument with those who do not but it strikes me that if the appendix is the foci of infection, it should by all means be removed, it requires little longer to do so. The only case I have ever operated without removing it is in the hospital now with fecal fistula and an empyema. This case had a severe pneumonia of the right lung at the time of operation and it was done under local. I think the fluid drainage is through the ruptured appendix and will necessitate another operation.

Another thing, this waiting for an abscess to wall off. It's walled abscess when it is an abscess, and when a doctor waits for the walls to become thicker he does so at his patient's peril. He is not getting elimination but is absorbing toxins all the time, and his fluid balance is being lowered, acidosis decreases his vitality. The days one waits for the walling off certainly increases the gravity of the case, when they could so well be used in the improvement of the case. With the after-care as specified here, the drains of proper size and length, placed in the proper positions you have a good chance to save the patient. Give large amounts of fluids, preferably salt and glucose. Keep patient ele-

vated, and lots of drains properly placed. Do not purge too soon. Do enterostomy before peristalsis stops. Take out the appendix and do not wait for walling off.

A WORKING KNOWLEDGE OF GOITERS

H. M. McCLURE, M.D.
CHICKASHA

The numerous classifications of goiters proposed from time to time have varied so much that confusion rather than clarity has been the result. The classification I will give is not my own but I believe that it is the best working classification up to the present time.

The classification is as follows:

1. Colloid goiters.
2. Adenomas without toxic symptoms.
3. Adenomas with toxic symptoms.
3. Graves' disease (with exophthalmus).

One of the facts that I would like to get across is that the classification I have just given, does not represent certain diseases of the thyroid gland, but rather represents stages of one progressive disease. So that when you diagnose one of the different stages you are not diagnosing a separate clinical entity, but rather you are only referring to a stage which is characterized by changes in the pathological and clinical findings. The clinical findings go hand in hand with the pathological findings and vice versa. A competent pathologist can, by careful study of the microscopical section depict the clinical findings of the owner of the gland studied.

I will not dwell on the non-toxic colloid goiters but I will say in passing that they should always be considered as a potential toxic gland.

The changes in the thyroid gland associated with toxic and non-toxic symptoms present four fundamental pathological characteristics which may be present in varying degrees but you may be sure that they are always present to some extent. These changes are: first, an increase in the height of the epithelium lining the acini. This increase is from the low cuboidal to high columnar; second, a dimunition in quantity and alteration in quality of the colloid; third, lymphocytic infiltration; fourth, circumscribed or diffuse adenomatous growths make up the histopathological elements out of which a microscopic picture of thyroids is constructed.

There are a few very important diagnostic points which we as physicians are apt to overlook in our routine history taking and examinations. These are very important for if a diagnosis of toxic thyroid is made early and the proper treatment carried out we will be able to save the patient's body considerable wear and tear which is surely going on if our diagnosis is correct.

If you come in contact with a patient who is losing weight but still has an appetite which is normal or better than normal, a toxic thyroid should be suspected. If you see a patient who says they are more nervous than before, and that they lose their temper more easily than they did in the past, always suspect a beginning toxic goiter. If a patient complains of tiring easily and that they are exhausted after a little work, be sure to delve into the history with reference to the symptoms produced by a toxic thyroid gland. If patients present themselves saying that their heart runs amuck at times, and that their heart pounds and skips be sure to feel of their neck. Therefore when you see a patient that has any or all of the following symptoms, namely, loss of weight, excessive appetite, irritability, nervousness, tachycardia, muscular fatigue, heart consciousness and perspiring hands, be sure to examine their thyroids with reference to hyperplasia or growths and even if you do not find an enlarged gland or an adenoma, have a basal metabolic rate at the earliest possible time.

The great trouble today is latent diagnosis of toxic goiters. We are prone to wait until the terminal symptoms, namely, extreme emaciation, exophthalmus, lid lag, disturbance of convergence, decompensated heart, or extreme tachycardia develop. There are a few abdominal symptoms which are very confusing but these are generally found in the terminal stages only. These abdominal symptoms are pain, vomiting and diarrhea. I want to impress and emphasize the fact that the size of the gland does not play any part in the diagnosis except where the gland is palpable or prominent. If the gland is not palpable but the clinical findings are present, do not hesitate to make a diagnosis of thyrotoxicosis.

The treatment of toxic goiters is one

place where the internist and the surgeon should be linked very closely, for the treatment of toxic goiters resolves itself into one procedure, or perhaps I should say two procedures, namely, preparation for operation and the surgical procedure itself. I have never seen thyrotoxic symptoms relieved, with completeness and satisfaction with any other procedures.

In perusing the literature one finds hundreds of ways to prepare the patient for operative procedures. But all of the methods, when carefully studied resolve themselves into Lugolizing the patient, rest in bed, plenty of sleep, high carbohydrate diet, the carbohydrates being pushed in the form of glucose candy, meats being entirely eliminated. Not infrequently digitalis is resorted to if the diagnosis is not made early, or the patient has previously refused adequate treatment. The length of time the above treatment should be carried out is determined by the change in weight, the reduction of the basal metabolic rate, and the clinical evidence of restoration to a normal pulse and a normal nervous balance.

I will not go into the surgical technique but I will say that I believe that fully 95 percent of the toxic thyroids can be removed under local anesthetic without any trouble to the patient or the operator. I believe that all goiters should be removed under local anesthetic and I personally like the technique used by Dr. A. E. Hertzler, of Halstead, Kansas.

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SOME PRACTICAL POINTS IN THE TREATMENT OF DIABETES

L. E. Woods, B.S., M.D.
CHICKASHA

This discussion assumes that the diagnosis is established. However, I would like to state that in an examination of the urine the absence of sugar is not sufficient to exclude diabetes as an etiology of the complaints that many times brings the patient to the doctor's office. In insidious cases the history may be inadequate to establish a diagnosis unless unusual care is exercised in taking it. Consequently a casual examination may lead to treatment of the obvious complications rather than the disease itself. For example, repeated crops of boils may be due to underlying mild diabetes and the patient have a sugar free urine, especially if he has for any reason reduced his diet shortly before being examined. Where there is a suspicion of this factor it is wise to give the patient a high carbohydrate diet and see if he then throws over sugar in the urine.

On the other hand, hyperthyroidism is frequently associated with elevation of the blood sugar and if the patient has a low kidney threshold he may show a glycosuria and the early symptoms of thyreotoxicosis be overlooked.

The treatment of diabetes is not essentially different in the home or in an institution. However, some of the institutional details may be impractical in the home. In either case the principles of treatment are the same and based on the control of diet, metabolism, hygiene, education of the patient and the use of insulin.

An effort should be made to establish a well balanced maintenance diet. If the diet is not well balanced there will be increased difficulty in keeping the patient strictly on his diet, and haphazard methods have no place in this problem.

To properly handle a diabetic patient it is essential to have the facts at hand that are necessary to work out a diet that is suitable for each individual case, also it is necessary that you know the part that fats, carbohydrates and proteins play in the diabetic diet and their relationship one to another.

The metabolism rate must be kept low because, as Wilder and his associates have shown, the ability to utilize glucose varies inversely with the metabolic rate. When the metabolic rate is lowest, glucose utilization is best and acidosis is consequently more easily controlled.

Proteins stimulate metabolism and for this reason the present endeavor is to maintain nitrogen equillibrium at the lowest level which is consistent with nutritive safety. However, a certain amount of protein is essential and it must be sufficient to maintain the nitrogen equilibrium without drawing on the body protein. In the adult this is about 2-3 to 1 gm. per kilogram body weight.

The carbohydrates of the diet depend on the ability of the pancreas to utilize them and should not be great enough to cause the appearance of sugar in the urine. Resting the pancreas is an old and important principle in the treatment of diabetes. If the islands of Langerhans are over-

stimulated by the demands of an excess of carbohydrates exhaustion and degeneration continues while rest obtained by keeping the blood sugar down will enable them to be better restored to function. If the exhaustion is already to the point that the patient cannot tolerate sufficient carbohydrates in his diet to preserve a safe ketogenic-antiketogenic ration with a maintenance diet he must then be given insulin sufficient to accomplish this end. The fact must not be lost sight of that the total carbohydrates of the diet is a sum of 58 percent of the protein, 10 percent of the fat and 100 percent of the carbohydrates. It is found that one gm. of carbohydrate will enable the body to metabolize about 1.7 gm. of fat. (1-1.3 is usually employed).

The metabolism of fat in the diabetic's diet is of greatest importance because if it is disturbed through inadequate oxidation coma may result. The proper utilization of fats avoid the subsequent production of acidosis which is the cause of coma. There must be a balance of the fats and the carbohydrates in the diet in order to properly utilize the fats and this balance or ratio must be such that the fats are equal to twice the carbohydrates plus 1-2 the protein. If this balance is kept there will be little danger of acidosis resulting from improper fat metabolism.

The total number of calories that are necessary for a maintenance diet will vary considerably, depending on the activity of the patient. If he is in bed with little activity, about 25 calories per kilo is usually sufficient. This figure must be increased depending on the activity of the patient. The patient's weight should be watched and the diet calculated to meet the demands of any increase or decrease in weight that is observed. Good hygiene is very essential in maintaining a diabetic patient's metabolic equilibrium. Worry, fright or any emotional extreme as well as any acute infection may upset the entire diabetic program. The patient should strive for good physical hygiene as well as mental hygiene. He should get plenty sleep and avoid fatigue. The bowels should be regulated and he should carefully regulate his activity and exercise.

It is necessary to get the intelligent cooperation of the patient and teach him the nature of his disease and the object of the treatment. He should learn to compute the food values in his diet and know the necessity for accuracy, likewise the hazard of any deviation from his rules. He should be able to test the urine for sugar and recognize the signs of impending disaster such as acidosis or insulin shock. From the beginning he should be taught to give his own insulin. If the patient is unable to utilize carbohydrates in sufficient amounts to permit him to take a maintenance diet without showing the presence of sugar in the urine he should be given insulin. The dosage of insulin should be such as will enable the patient to take a maintenance diet without showing sugar in the urine and this will have to be determined for each individual, as the severity of the case as well as other factors determine the dose necessary to accomplish this. Small doses should be given in the beginning and these increased to the point where the urine is free of sugar with the patient on a maintenance diet. In determining this the specimens of urine passed at different times of the day should be examined separately, for in many cases it will be found that the patient's ability to handle glucose will vary at different times of the day and if such is the case the respective dose of insulin should be increased or decreased to take care of this variation. If this point is observed you may avoid insulin shock which may occur if too large a dose of insulin is given when the patient's ability to handle carbohydrates is at its best. Insulin is given primarily to produce energy and not for the purpose of permitting him to indulge his dietary excesses. If the patient is emaciated a diet above that of maintenance may be employed with care and deliberation. To attempt this end hastily may result in disaster. It is best to keep the weight of the patient somewhat below his normal weight.

HYDATIDIFORM MOLE WITH REPORT OF A CASE

B. R. GAYMAN, M.D.
FOSS

This condition was first reported by Shenck von Grafenberg in 1516, but the true nature of the disease was not recognized until 1827, when it was reported by Velpeau.

Hydatidiform mole is a relatively rare disease variously reported as occurring once in 20,000 to once in 2500 pregnancies, the latter figure probably being more nearly correct.

Pathology—There is a profuse and irregular proliferation of both the Syncytium and Langhan's layers of the placenta which penetrates the fibrin layer and frequently invades the uterine musculature.

The condition may be either benign or malignant, however, this may only be differentiated clinically since there is no microscopic difference. On gross appearance the mass is made up of a great many clear cysts joined together so that they look much like a bunch of grapes. The mole may involve the whole placenta or only part of it and the foetus is destroyed early so that there may be none of it demonstrable or only a part of the cord may be left.

Symptoms—Enlargement of the uterus over that to be expected for the length of pregnancy. Painless bleeding early in pregnancy. Passage of grape-like cysts.

Diagnosis—Is made from the history of the length of pregnancy compared to the size of the uterus, the history of painless bleeding, passage of cysts, and on bimanual examination the finding of the mass resembling a bunch of grapes in the cervix.

Treatment—Since the growth frequently invades the uterine musculature manipulation must be very gentle to prevent perforation. The cervix should be dilated sufficiently to admit the finger, then the mass is carefully peeled off and removed, after which the uterine cavity is explored to be sure all pieces are removed and a pack inserted. Warning—the curette should not be used because of the weakened uterus. The patient is to be watched for several months because of the possibility of malignancy.

CASE REPORT

Mrs. J. N., white, 35 years of age, 4 para, has previously been in good health. Her family history is entirely negative.

The last menstrual period was about August 15, 1929. On November 14, she was seen and complained of cramping pain in the lower part of her abdomen, not severe, free hemorrhage, and the passage of some material from the vagina.

Physical examination—Head and neck, normal except for infected teeth and gums; chest, normal; heart and blood vessels, normal except pulse is rapid, 112; abdomen, a mass the size of a 5 1-2 month pregnancy in the lower abdomen; vaginal, free flow of bright blood especially with uterine contractions. The cervix soft and dilated 2 cm. with a mass which felt like a bunch of grapes filling it.

Treatment—Since the cervix was dilated the index finger was introduced into the uterus and the tumor mass peeled loose from the uterus and removed, an iodized pack was inserted which was removed the next day.

The mass removed consisted of many small cysts of pink color joined together so as to form a large cluster, and a piece of normal placenta about 3x4 cm. in size, the whole mass being about large enough to fill a quart fruit jar in which it was placed for preservation.

The patient made a satisfactory and uneventful recovery and has as yet shown no signs of malignancy.

—o—

SOME OF THE ESSENTIALS OF A SUCCESSFUL HOSPITAL*

Miss Evelyn Buchan, R.N., Superintendent.
Weedn Hospital, Duncan, Oklahoma

Mr. President, Members of the Oklahoma State Hospital Association and Friends:

I will give you what I think to be some of the essentials of a successful hospital.

I should perhaps state first of all, the locality of your hospital and its surroundings, artistically planned, with free exposure to sunshine, cool breezes and the open sky. Velvety, well kept lawns, and bright sunshine, together with plenty of trees and shrubbery. A restful picture it presents, as watched by the sick one inside, to whom beauty at this time is so much appreciated.

Now, as we step into that building situated on such an ideal location I wonder if there are not many problems to be adjusted therein. First, may we not consider that which I think is the greatest educational feature of a hospital, its nursing staff, the ones who have kept the real spirit of service in the hospital alive today; the right kind of training for them.

We may argue pro and con regarding this matter, set up requirements for educational standards, flaunt hours of theory at bewildered freshmen, worried juniors and seniors, add to and take from their curriculum to make the R. N. theoretically

*Presented at the annual convention of the Oklahoma State Hospital Association, Tulsa, December 4.

the finished product when she leaves our schools. But if we have failed to bring the young student in her first hours of training the right viewpoint of her profession, if we have neglected to impress her with the realization that she has been caught into a glory of service, and if we have taken into the profession women whose lives are not lived according to the highest moral standards, our failure to select the proper type to become a nurse, then we, as hospital people, are to blame, indeed, our teaching and preaching has been in vain.

Health, age, personality, and the very earnest desire to be a nurse, should be considered in the applicant. If one is admitted to the hospital training school and during her course of instruction is found undesirable because she cannot master her theory, who is poor in her practical work, and who also has the wrong influence on other students, should be eliminated as quickly as possible, regardless of sentiment or pressure form the outside. After all, do we not all say at times, "Would I be proud to claim her as a graduate from my school?"

We have many schools in the country I have heard, however, I can scarcely believe it, who allow, I will say allow, their nurses many privileges such as smoking, drinking, late leaves granted often, unchaperoned. How could one expect the perfect nurse in a school with this discipline? We do not want nurses who are hardened, coarsened by unwholesome contact with things of this sort, but to bring them through the years, teaching them, the cultural things of life, and their real responsibility as women of this profession. Bedside nursing is after all that degree of nursing which concerns our patients most. The good, kind words of that grateful patient concerning the wonderful attention received from that little bit of personality, your student, means so much to the hospital, to you and to her. Again I might mention, close attention to bedside service from the student nurse is not to be considered lightly. Sometimes we give more thought to theory and not to bathing the face, a real good back rub, the shaking up of the pillows, preparing an attractive tray, tempting the sick to eat some delicacy, all these innumerable things go to make the satisfied patient. So we must have just a little more personal sympathetic contact and that, I think can be gained only through real, loyal workers.

Next to the student nurse, I think it quite appropriate to discuss the proper selection of that student's supervisors, instructors and her superintendent. Not every graduate nurse is by any means an instructor, or is qualified to organize and manage a hospital, no matter how small. And sometimes when the right nurse does come along, and they seem to come very slowly, she is so overburdened with responsibility that she soon breaks under the strain of serving in a double capacity, or should I say triple, that of business manager, superintendent of nurses, and sometimes janitor. And scarcely any time is left her for constructive thinking. But with the cooperation of one of the more efficient graduates, it is indeed a pleasure to have a superintendent who has such cooperation, having things go like clockwork, pleasant at least when things do not go smoothly, and after all, the one who is instrumental through her effort and ability in sending out our patients with the kindliest feelings toward our institution. So, therefore, this person should be chosen not only for her technical ability as a nurse, but for her ability to guide others, being courteous at all times even to complaints that come from nurses, patients, their relatives, orderlies, maids, and all the many people who come to her with everything. Indeed, she must be a person who has the virtue of a saint, the patience of Job and the wisdom of Solomon.

A well equipped hospital is our next essential, not so much stress to be laid on the beautifully carved furniture in our reception rooms, the tapestry and portraits adorning our corridors, the lavish display of furniture in our solariums and private rooms. Beauty, yes, we desire. But let it be simple, substantial. The actual needs of the institution for the patient, physician, nurses, come first, keeping in mind the patient's interest at all times. Too many hospitals spend money lavishly on buildings of architectural splendor, costly furniture in our nurses' homes, spoiling in a sense that little girl from her humble home's idea regarding luxury, disregarding the importance of a well equipped sterilizing room, laboratory, class room, demonstration room so necessary in the daily routine. That brings us to the subject of carefully selected equipment, economy in purchasing supplies and materials used daily.

We have heard so much concerning the

efficiency of purchasing, but we have not heard a great deal about the efficiency of issuance. The intelligent purchasing of hospital supplies cannot be made without an intelligent understanding of this phase of economy. Keeping a perpetual inventory and a check on all outgoing supplies is one solution to this problem. And I might say here that it is a mistake to let the heads of each department do its own purchasing. One or two reasons may be given. First, they do not have the same opportunity to keep in touch with the market. Second, it prevents duplication of orders. Third, it allows a better method of procedure in checking invoices and supplies brought to the store room. A central store and service room is a real economy. A requisition slip is brought to the main office, which is turned over to the buyer who can then know when the supply is really exhausted, and therefore orders accordingly. Of course, such articles as hot water bottles, ice caps, tubing and sheets that deteriorate, and perishable supplies, are bought in small quantities, and liquid soap, creosol, lysol, vaseline bought in large quantities at a saving. In regard to our linen supplies a seamstress should be employed part or full time, who will make up sheeting into the desired sized sheets, toweling, curtains, patients' night shirts from unbleached muslin or sheeting, operating caps, and who will in her spare time mend torn linen, as the old proverbial saying applies in this instance as well as in others, "a stitch in time saves nine."

Now, in regard to food which calls for careful buying, and which in our smaller institutions who do not employ a dietitian or buyer, is not given the attention it deserves. And how price in food stuffs vary in the different stores. Even the careful buying of the various cuts of meat is as important as the cooking. The uselessness of wasting food, especially in the diet kitchens, should be taught employees. Handling large amounts of food, they become indifferent to the need of saving and consider small amounts not worth bothering with, so off it goes into the waste can,

Food left in containers on the steam table should certainly be sent back to the kitchen to be used again. These small items are quite worth considering. Too many hospitals are prone to use canned goods in preference to fresh foods. This is, indeed, a wasteful practice.

At this time I think it wise to say something regarding the obtaining of funds with which to buy these supplies. Though some of you may think it most unsuitable to bring up financial matters with the patient as soon as he enters the hospital, I think the best and only way to conduct business efficiently is to talk business from the start, being diplomatic and courteous all the while, and state that you wish to collect a week in advance and also ascertain their ability to meet further expense while in the hospital. If there is any doubt whatsoever of a clear understanding this should be discussed at the very beginning. Did you ever have a patient leave your hospital when you were trying to collect for the first week? I have had that experience, the patient being taken out to another hospital where they incurred an expense of several hundred dollars; later they returned to our hospital and paid in cash a bill of $400.00, leaving highly satisfied and have ever since been loyal friends of ours and boosters for our institution.

A good business manager in a hospital is indeed a valuable asset. No matter how small the institution, it should employ a person who understands business methods, business ethics, and can devote full time to the handling of books and accounts; therefore eliminating that part of the work from the busy superintendent. Besides, it it so much easier to say or refer your patient to the business manager, isn't it, doctors? Yes, indeed, and much more profitable.

Having thoroughly efficient people at the head of each department, adds greatly to the betterment of your institution. It is found to be so much more economical besides the efficiency of service and time saved the physician in charge of other personnel. And may I mention something concerning your laboratory. A thoroughly equipped one, which so aids in diagnosis, helpful both to your community and hospital. A routine laboratory procedure may then be used on every patient, as a blood count, urinalysis and Wassermann, taken at a moments notice, thereby eliminating guesswork. At the present time there are too many hospitals that do not have fully or partially equipped laboratories or a thoroughly trained technician, the reason oftimes given for not having them being that they are unable to maintain one. But that is nonsense. If your hospital has but ten beds, you should have an efficient laboratory and the proceeds therefrom

should enable one to retain the services of a competent technician.

The various other departments such as the record, physio-therapy, X-ray and dietary, deserve honorable mention and discussion, but time hardly permits.

Weekly, or better, monthly conferences with your department heads, regarding costs, supplies, correspondence, new methods of service, number of patients treated, etc.; not a time particularly to discuss unpleasant things, or thrash things out, if you will excuse the slang, but as in the physicians' and surgeons' staff meetings, something for the betterment of the organization. The contact it brings, just in getting together means something. Everything after all, when simmered down, is for our guest, the patient. Check each department closely to ascertain the net proceeds from such department. As a matter of fact, you will occasionally and more often than you would think, find a particular department giving less than adequate returns for the money invested. Now, in matters of this kind, I think this should not be left until tomorrow to settle, but immediately bring into action the things necessary to put this deficient department on a paying basis. If the head of that department tells you that it cannot be done, it may be necessary to take that department over and prove that it *can be done*. Another thing, I will call your attention to at this time, if you have any quitters or "canters" in your employ, "can" them or quit them immediately, replacing them with stickers.

Last, but not least, in your organization the building of an efficient, loyal, competant staff, not to the hospital alone, the patient, but to the fellow staff members as well. They must be loyal to the hospital and to themselves if congeniality is to be expected. Being as careful as you may, there will occasionally be a physician who will obtain membership on your staff, who will keep your staff in an uproar, sometimes for a selfish motive. The quicker you can dispense with him, doing it as diplomatically as possible, the better your staff will be. Congeniality and the spirit of cooperation among each and every member must be manifested if you would safeguard the interest of the patient.

Many other things I should like to bring up, especially in regard to the little things in our daily hospital life that count. Front door courtesy, telephone information given in a courteous tone, a spirit of good fellowship ever prevailing. The cultivation of a wonderful personality that so pleases our patients. As Oliver Wendell Holmes gave us to ever remember, in regard to the sick ones:

"Last, not least, in each perplexing case
Learn the sweet magic of a cheerful face.
Not always smiling, but at least serene
When grief and anguish crowd the anxious scene
Each look, each movement, every word and tone
Should tell the patient you are all her own.
Not the mere artist purchased to attend
But a warm, ready self forgetting friend
Whose genial presence in itself combines
The best of cordials, tonics and anodynes."

VACCINE THERAPY

Ludvig Hektoen and Ernest E. Irons, Chicago (Journal A. M. A., March 16, 1929), report on the result of a questionnaire on vaccine therapy sent to American physicians. Of 1,261 physicians answering the questionnaire, only seventeen consider vaccine therapy to be a generally useful and superior method of treating infectious diseases. Of the 1,261 physicians, 430 do not use, or have never used, autogenous vaccines in the treatment of any disease, and 142 use or have used them very rarely; 172 physicians report having abandoned the use of autogenous vaccines entirely. Of the 1,261 physicians, 577 do not use, or have never used, stock polyvalent vaccines in the treatment of any disease, and forty-nine use or have used them very rarely; 198 physicians report having abandoned the use of stock polyvalent vaccines because of their failure as therapeutic agents. One or more of the 1,261 physicians report using or having used stock vaccines in sixty-three different disease conditions. In every one of these conditions, save otitis media, mastoiditis, acne, furunculosis and whooping cough, 90 percent or more of the physicians of all four groups do not at present use polyvalent stock vaccines therapeutically. In the majority of instances the percentage not using is nearer 100 thar 90. In the sixty-three different disease conditions in which the use of stock polyvalent vaccines is reported, the negative or inconclusive results greatly outnumber the good results in all but a few instances. Of the 1,261 physicians, 140, or 11 percent, report untoward and harmful effects from the use of stock polyvalent vaccines. The 140 instances of harmful results include a number of cases in which death has been considered due to the use of vaccines, subcutaneously injected. Seventeen cases of asthma are reported to have followed courses of bacterial vaccines, administered to patients who previously were not known to have suffered from asthma. A questionnaire on the use of various forms of vaccine in tuberculosis was sent to tuberculosis specialists, and of the 267 that answered five state that they use tuberculin as the main form of treatment in this disease. The majority counsel against its use in all but quiescent or slightly active cases; sixty-three (23 percent) report harmful results from the use of tuberculin, autogenous or stock vaccines, and from the "Non-Virulent T. B. Vaccine." Of sixty-three, seven have observed deaths to occur which they attribute to the injudicious use of tuberculin; five have observed deaths to occur which they attribute to the use of stock polyvalent vaccines.

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Failure to receive The Journal should call for immediate notification of the editor, Barnes Building, Muskogee, Oklahoma.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

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EDITORIAL

HOSPITAL SERVICE AND THE COST OF MEDICAL CARE

It is of great speculative interest and should cause physicians and officials generally, of the State of Oklahoma, to ponder upon the findings and deductions recently made public by Durant Duncan of the agricultural economics department of Oklahoma A. &. M. College, a report based upon a study and survey of health expenditures in 508 farm families of eight typical cotton communities in Oklahoma.

It was revealed that farm families of the "cropper" class spend only one-half as much per year for health maintenance as families of the full "owner" class. Where 38 families of the "cropper" class spend $41.00 for all health purposes in 1925, 139 families of the full "owner" group spend $82.00 each. Other surveyed groups showed part owners spending $80.00 a family and 275 share and cash tenant families spending only $75.00.

For doctors and hospital care full owners spend $53.00; part owners $45.00, while share, cash and "cropper" farmers spend only $26.00. The survey deducts the indication that Oklahoma farming families, like the farming classes in many other states, who stand in ready need of health protection, are the least able to afford it.

The report notes that one unvaccinated child in a community is always an incubator for the germs causing diphtheria, smallpox, scarlet fever, and the like. Duncan insists that health education of the farming classes, along decided economic and social lines must be executed before anything worth while is accomplished.

As to the cost of hospital service for patients of moderate means, the report of Niles Carpenter' indicates that economic changes, changes in our civilization are rapidly bringing about and will continue to bring about radical changes in hospital construction, maintenance and incidentally the cost of medical care. Everyone, of all social groups, from the poor through the well-to-do as well as the rich, demand hospital care.

It is noted that most of the newer hospitals now provide one or more of three types of accommodations best suited for the patients of moderate means—that is, beds in semi-private rooms, beds in small wards and inexpensive single rooms. Nineteen architect members of the American Hospital Association report a rather sharp falling off in the percent of beds in large wards, from 1908 to 1928. Wards with cubicles seem to be one of the favorite means of affording semi-privacy to patients desiring such accomodation, while 2, 4, and 6 bed wards are becoming popular.

The Massachusetts General Hospital plans a new construction of 300 beds of wards containing also cubicle four-bed wards, two-bed semi-private rooms, and single rooms. The rates vary from $6.50 a day for single rooms, to $4.00 a day for cubicles. According to the director of this hospital it is proposed to limit the fees that may be charged by the staff, to fur-

nish so high a grade of floor nursing that special nurses will be rarely required.

From the medical profession there has slowly grown up over the past years insistent demand that hospitals make available to the patient, and within economic bounds, certain basic and necessary facilities, these especially include routine laboratory work, some of them even including X-ray work.

The solution of these problems lies squarely upon the shoulders of the medical profession. It is only upon the advice of the competent physician and surgeon that gradual reforms, improved technique and equipment, will be made available to people of moderate means.

Considering the enormous, potential and actual wealth of Oklahoma, very little has been done toward the endowment of hospitals as such. Millions upon millions of dollars in oil alone have been produced by the State but very little of it has been of benefit to what is commonly called the middle or lower classes of people.

1. Abstract No. 4 Publication by the Committee on the Cost of Medical Care, 910 Seventeenth Street, N. W., Washington, D. C.

SUBPHRENIC AND LIVER ABSCESS

Perhaps one of the most baffling conditions confronting both internist and surgeon and in which diagnosis is usually long delayed, is that of formation of pus between the diaphragm and the liver or in the liver itself. Joseph Schwartz[1] quotes Barnard as including with subphrenic abscess any liver abscess near the surface and more or less intimately associated with the diaphragm. The behavior of subphrenic or liver abscess presents some very unusual traits; for instance, Schwartz states that empyema is rarely complicated by a subphrenic abscess—his observations cover 150 cases of empyema —nor has he ever observed it postmortem. Whipple in one thousand cases of subphrenic abscess, found 25 percent due to stomach lesions, 21 percent due to appendicitis, 16 percent to biliary tract, 5 percent to the duodenum, and the rest secondary to lesions of the kidney, spleen, pancreas and lungs.

The onset of the case is usually slow, the symptoms nearly always misinterpreted and the patient may come to a very low state before proper surgical intervention is undertaken. In eight primary cases reported by Schwartz, that is cases of subphrenic or idopathy liver abscess, grippe was the condition thought to be present in every case by the physician in attendance.

Bronchovesicular breathing, cough, dullness on percussion of the lung, in fact, many indications of chest involvement one case being complicated by a bilateral pneumonia, are concomitants of these cases. Pain on respiration, elevation of temperature, chilly sensation, malaise, increased weakness, are the rule.

Schwartz noted in four of his cases that edema over the lower axillary part of the chest on the side of the abscess was present, however, this generally appeared when the case was well advanced. It is significant that many of these case are admitted to the hospital with a prevailing diagnosis of pneumonia. In the writer's experience, two such cases after operation were found at post mortem to have ruptured upward and through the diaphragm into the pleural cavity. In the cases reported by Schwartz death occurred almost immediately, and apparently after rupture of the pus into the pleural cavity. Frequently X-rays of the affected side may show the diaphragm to be higher than normal, in one of the writer's cases —believed subphrenic, but idiopathic abcess of the liver— the diaphragm reached to the 6th rib; at that time the man had been in a hospital for 36 days, and prior to his entrance to the hospital he had not felt well. It is the writer's opinion that the prognosis in these cases is always uncertain, some apparently very prolonged desperate cases rapidly improving, while others go to a fatal outcome despite any and all means.

Schwartz notes that roentgenograms and fluoroscopy aid in disclosing the lesions, elevation of the diaphragm with restricted excursion, presence of air with or without a fluid level beneath the diaphragm and intrathoracic changes leading to a diagnosis of pneumonia and pleural effusion.

Success in treatment usually depends upon the earliest possible recognition of the condition, and prompt surgical intervention. The mortality rate is high simply because the condition is either not recognized at all or is recognized so late that extensive pathologic changes take place, or because the abscess is inadequately drained. Insufficient drainage is a useless procedure. The drainage area should be wide and ample.

1. Archives of Surgery, Number 2, February, 1930.

Editorial Notes—Personal and General

DR. GEORGE L. JOHNSON, of Atlanta, Georgia, has been assigned medical officer in charge of the U. S. Vetrans at Muskogee.

DR. HUGH SCOTT, Chicago, "transplanted Oklahoman," recently spent three days visiting Muskogee friends and renewed old acquaintances.

KINGFISHER COUNTY MEDICAL SOCIETY elected the following officers for 1930, at a meeting held in February: Dr. Newton Rector, Hennessey, president; Dr. C. M. Hodgson, secretary.

DR. E. A. WELCH, Washington, D. C., has been assigned as clinical director of the U. S. Veterans' Hospital, at Muskogee. Dr. Welch succeeds Dr. E. K. Moore of Philadelphia, who has been assigned to the central office at Washington, D. C.

ALBERT PIKE HOSPITAL, McAlester, recently conformed to the standard of requirements of the American College of Surgeons and is now on the standard list of hospitals. This is indeed an accomplishment for any hospital in a small city. The staff of Albert Pike Hospital is to be congratulated.

OKLAHOMA SOCIETY FOR CRIPPLED CHILDREN has issued a short pamphlet to all the physicians of Oklahoma, containing in brief an abstract on "The Laws Governing the Treatment of Indigent Children" affected with orthopedic conditions. Oklahoma physicians should retain and keep its provisions in mind.

OKMULGEE-OKFUSKEE COUNTY MEDICAL SOCIETIES entertained with a cancer clinic, dinner and evening meeting at the Okmulgee City Hospital, January 20, 1930. Dr. Ellis Fischel, St. Louis, was the guest of honor. He delivered an address on "Cancer and the General Practitioner"; in connection with this he showed and explained the Canti cancer film.

DR. R. M. SHEPARD, announces the opening of his office, 306 Medical Arts Building, Tulsa, for the diagnosis and treatment of diseases of the lungs. Dr. Shepard was formerly superintendent and medical director of the Oklahoma Tuberculosis Sanatorium at Talihina. For the past two years he was superintendent and medical director of the Valley View Sanatorium at Paterson, N. J.

DR. S. R. CUNNINGHAM, Oklahoma City, member of the "Committee on Traumatic Surgery of the American College of Surgeons," appeared on the program at the meeting of the American College of Surgeons at Denver, Colorado, in January. Subject for clinical lecture was, "Skeletal Traction for Fractures of Long Bones." Dr. Cunningham also read a paper at the general meeting on "The State's Duty in the Care of Crippled Children."

DR. WILLIAM HENRY WELCH, one of America's most brilliant physicians, will be honored on April 8th, the date of his 80th birthday. Friends and admirers of Dr. Welch will celebrate his birthday in Washington in a manner befitting his distinguished career and outstanding contributions to human health, happiness, and knowledge. The management of this celebration is sponsored by a remarkable array of talent and brains, both medical and lay.

MUSKOGEE COUNTY MEDICAL SOCIETY held a regular "field day" meeting February 10th. More than forty physicians were present. The speakers of the occasion were Dr. Basil A. Hayes, Oklahoma City, who delivered a talk, illustrated by lantern slides, upon "Common Rectal Disturbances and Their Relief." Dr. LeRoy D. Long, Oklahoma City, delivered a classic address, also illustrated, upon "Splenic Anemia." The meeting was voted a very pronounced success.

OKMULGEE-OKFUSKEE COUNTY MEDICAL SOCIETIES entertained physicians from Muskogee, Tulsa, Seminole, Hughes, McIntosh and Lincoln counties, February 13, 1930, at dinner at the First Presbyterian Church, Henryetta. Dr. Harvey B. Matthews, associate professor of gynecology, Long Island College Hospital, Medical School of Brooklyn, N. Y., was the speaker. His topic, illustrated by lantern slides was, "Diagnosis and Treatment of Chronic Endocervicitis."

DR. E. J. ROSE, for two years medical officer in charge of the U. S. Vererans' Hospital, Muskogee, was recently transferred to the central office in Washington, as chief of the medical division. The removal of Dr. Rose is considered a distinct loss by the profession and laymen of Oklahoma, who came in contact with him as an official. Nearly 300 people from over the State attended the banquet in his honor at the Masonic Temple Thursday, February 13th. Dr. Rose leaves Oklahoma with the best wishes of those who knew him and his work.

OKLAHOMA PUBLIC HEALTH ASSOCIATION, according to Dr. Carl Puckett, secretary, Oklahoma City, announces that the Annual Early Diagnosis Campaign will be conducted in April. Dr. Puckett is prepared to furnish booklets and data to every physician who will prepare a paper on "Childhood Tuberculosis" for presentation to any County Society. The Public Health Association also has a few films, including one for this year which will be sent anywhere they may be used. The association would also like to have medical societies see that talks on tuberculosis prevention, are given before civic clubs, chapels in schools and in any other places where such may be believed to be beneficial.

DOCTOR EDGAR E. RICE

Dr. E. E. Rice, age 60, pioneer physician of Shawnee, died at his home, 706 North Park Street, January 27, 1930, from complications resulting from injuries received in an automobile accident, last November.

Dr. Rice was born in Flora, Indiana, in 1870. He received his A. B. degree from Logansport College in Indiana, and his degree in medicine from the Hospital College of Medicine at Louisville, Kentucky. Dr. Rice came to Shawnee in 1905.

Funeral services were conducted by Rev. W. A. Merrill of the First Christian church, with burial in the mausoleum.

Dr. Rice is survived by his widow, his son, Dr. Eugene Rice, Shawnee, and a brother, Dr. Lee L. Rice, of Bridgeport, Illinois

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D
717 North Robinson Street, Oklahoma City.

Direct Skeletal Traction in the Treatment of Fractures. E. W. Hey Groves. British J. Surg., xvi, 149, July, 1928.

The writer states that there is no ununited fractured long bone which cannot be corrected to full length and proper axis by skeletal traction. He discusses the use of the transfixion pin, nails driven into the sides of the bone, ice-tongs calipers, horseshoe clamp with screws, os calcis stirrups, and silk and wire loops. He believes that the transfixion pin is the most satisfactory.

It is always necessary to use a general anaesthetic in applying these pins, whether through the lower end of the femoral shaft above the condyles, in the tibia, below the tibial tubercle, or through the olecranon in fractures of the humerus. The technique of the application is given in full.

When the lateral displacement requires reduction by open operation, and the bones cannot be made to interlock, he partially transfixes the fragments by metal bradawls. These are left in place while the plaster is applied and are incorporated in the plaster. He claims that union is faster than by the use of plates and screws.

Changes of the Hip Joint Following the Reduction of So-called Congenital Dislocation of the Hip Joint. Waichiro Matsuura (Igakuschi), assistant to Professor Takagi, Orthopaedic Department of Tokyo Imperial University. Proceedings of the Japanese Orthopaedic Society, Vol. II, Pt. 1, 1927.

Since 1906, we have examined 210 patients by means of radiographs, after recovery from congenital dislocation of the hip joint. They were treated by non-operative methods. Some of the cases were traced, following up the progress of the condition for eighteen years after the reduction was made, and they were examined, radiographs being taken every two or three months during the first year after replacement of the hip joint.

An observation was made of the radiographic work systematically, concerning the hip joint changes, studying 112 cases the radiographs of which were perfectly taken through the mid-line anteroposteriorly, after these cases were considered to be anatomically cured. The important measurements of the radiographs were taken to explain the construction of the hip, comparing the affected side with the so-called normal side, and, in the case of adults, comparing the affected side with the normal adult hip according to Professor Takagi's statistics.

Following the observation of the author concerning the form of the acetabulum, it was proved that Ludloff's "Gleitfurche" (sliding groove) had disappeared, being filled in by new formation of bone in a year after the dislocated hip joint was reduced. It was further proved that the contour of the acetabulum was improved, and a slight hazy irregular shadow had been formed in those cases which were examined a few years after recovery. The measurement of the acetabulum shows that it develops less inferiorly but more laterally. Also the angle, which is measured through Wollenberg's Y. is larger than that in the normal side in almost every case.

The size of the osseous part of the femoral head was determined by careful measurement, and it was found that there was no difference in curvature of the articular surface of the head of the femur from that of the normal side, though the head is usually flat. In numerous cases in which the dislocation was reduced before three years of age, the head appeared almost the same as the normal side.

The author has written in detail about the atrophy of the osseous tissue of the femur. This was not observed in any case which was examined later than seven years after reduction. But there was shown to be an increase of lime deposits in the head during the immobilization treatment period, and it was also seen that there was a peculiar double contour of the head in the recovered cases within three years.

Important measurements were made to explain the relation between the acetabulum and the head of the femur and make clear what is the position and relation between the acetabulum and the head of the femur.

Detachments of the Epiphyses of the Elbow from a Roentgenological Point of View. L. M. Asti. Radiol. Med., XIV, 625, August, 1927.

The author first describes the manner and order of appearance of the nuclei of the bony extremities which form the elbow, insisting upon the importance of the exact technique. He believes nevertheless that the projections that deform the roentgenological picture of the nuclei cannot be causes of error, since, when the error of technique is such as to alter the relations of the nuclei with the corresponding epiphysis, there will also exist such a deformity of the bony parts as to place the reader on his guard. If the error of technique is not marked, it will not modify the relation between the nuclei and the corresponding parts. He proceds then to consider separately the varioius detachments, viz., the detatchment of the epicondyle, the detachment of the trochlea, that of the epitrochlea of the olecranon and that of the nucleus of the radial head. Of almost all of these varieties he gives examples, basing his observation upon 800 cases of trauma of the elbow. The difficulties that may be presented in the interpretation of some roentgenograms may be great. The author believes that cases of detachment are to be considered as rare and gives the roentgenological data for making the diagnosis of the condition.

DERMATOLOGY, X-RAY AND RADIUM THERAPY

Edited by C. P. Bondurant, M.D.
413 Medical Arts Building, Oklahoma City

Treatment of Varicose Ulceration by Intravenous Injections of Quinine. K. P. Brown, Edinburgh M. J., 35:472 (August) 1928.

The author states that Brown has treated twelve patients with varicose ulceration by injection of a quinine solution. A total amount of 2 cc. was injected on the first occasion, with the patient in an upright position; usually .2 cc. were injected at four different points in the varix. Ten

patients were completely cured by the continuation of these injections at weekly intervals until thrombosis of the veins was complete. In one patient the varicose veins became thrombosed, but the ulcer, after slow healing, rapidly broke down again. This was one of the first patients to be treated; his history sustained a chronic edema of the leg of considerable duration; therefore the patient was not a suitable subject for this method of treatment. In the only other unsuccessful case, neither venous thrombosis nor healing of the ulcer resulted from the injections.

Primary Tuberculous Lesion on Lip. J. Duken, Arch. f. Kinderh. 84:223 (June) 1928.

The author writes of the case of a child, in whose family there was no tuberculosis, but who was often closely associatel with an adult with pulmonary tuberculosis who had just left a tuberculosis hospital. A peculiar small ulcer with a grayish white coating appeared on the right side of the upper lip. It resembled an impetigo lesion but showed no tendency to crust formation. It did not respond to impetigo treatment, and it did not spread, and it was the only skin leision on the body. The cervical glands on the same side swelled three weeks later. They softened, and when incised, creamy pus escaped. The wound did not heal and fistulas remained for several months. The tuberculin test, applied four months after the initial symptom was strongly positive, and the child was sent to the clinic. With the ulcer on the lip still present, clinical and roentgenological examinations of the thoracic organs were negative, and no manifestations of tuberculosis could be discovered elsewhere in the body. A rapid change in the lip ulcer was brought about by general ultraviolet irradiation and a complete change in diet without local treatment. It became transformed into a bluish scar at the end of two weeks. The course of the entire disease speaks in favor of primary tuberculosis.

Epidemic of Infectious Erythema. P. Kissinger, Munchen. med Wshnschr. 75:1381. (Auf. 10) 1928.

The author writes that nine of the ten cases reported by Kissinger occurred in a home for children threatened by tuberculosis. The patient in the first case appeared four and one-half weeks after the latest admissions to the house, which had fifty-one inmates aging from 4 to 14 years. There was, in this case a slight redness of the throat and swelling of the glands, in addition to the exanthem, fever, coryza, and conjunctivitis; fever appeared only twice again in the series of ten cases, and in most of the cases coryza, conjunctivitis, swollen glands, etc., were also absent. The eruption was, in most cases, on the cheeks and the extensor surface of the arm, where it appeared in garland form. In some cases the eruption resembled measles, in others erysipelas; there were no complications, and in one case only, the illness lasted longer than a week. One case occurring outside the institution was in a 4 year old child who had not come into close contact with the children of the institution. All the patients except one were girls, and all had drunk raw milk.

Generalities Concerning Fungus Diseases of the Skin. II. Memoir: Trichophyton Violaceum. R. Sabouraud, Ann. de dermat et syph. 9:769 (Sept.) 1928.

In the first memoir of Sabouraud he considered favus; in it he discussed infection with T. violaceum, because this organism seems to be widespread geographically and responsible for more cases than any other fungus of like order. It is uncommon in France; but was one of the first fungi to be described by the author in 1892-1895.

The author states that it is a true endothrix; that a hair invaded by this parasite becomes fragile, so that when it is a case of the scalp the hairs are broken off practically at the cutaneous surface, and the "black dot" clinical type is produced. Tinea capitis caused by this organism may persist into adult life; all of Sabouraud's cases in the adult have been due to this organism, which explains the many cases of adult tinea capitis reported in Russia where T. Violaceum is a common organism. The author has rarely encountered this fungus in the beard, but it is said to be fairly common in this region in other countries. Its invasion of the nails is rarely observed in France, though frequent in other Mediterranean countries. Russian authors have, of late described extensive, figured, and marginate patches produced by this parasite. Sometimes cases of deep abscess formation, lymphatic and even osseous invasion have been ascribed to this organism.

Sabouraud studied a culture of Achorion violaceum sent him by Bruno Bloch (who first isolated that Achorium) and concluded that it was doubtful that Bloch's organism was a true Achorion.

T. Violaceum has many other peculiarities and features sharply differentiating it from other Trichophytons, so much so that Sabouraud thinks it might be justifiable to take it out of the Trichophyton group and designate it Erythrophyton.

Scleroderma and Calcinosis. R. H. Durham, Arch. Int. Med. 42:467, (October) 1928.

Fourteen cases of calcinosis associated with scleroderma or sclerodactylia have been collected and added by Durham to the nine cases reported in 1911, the author writes. In four of the eight cases of scleroderma and calcinosis, there was an accompanying sclerodactylia. In three cases of sclerodactylia with calcinosis, there was no recognizable sclerodoma. The usual location of the calcinosis, the fairly characteristic type of deposit, and the close local relationship of the two conditions (deposits usually in areas of scleroderma), suggest that the combination of scleroderma and calcinosis constitues a distinct pathologic entity, despite the infrequent occurrence. It is nowise clear whether calcinosis with scleroderma results from local metabolic alterations or deranged inorganic metabolism. As in other types of pathologic calcification, the colloidal proteins are thought to play a prominent role, the author states.

Relative Low Humidity of Atmosphere and Much Sunshine, as Causal Factor for Great Prevalence of Skin Cancer in Australia. H. Lawrence, M. J. Australia, 2:403 (Sept. 29) 1928.

Skin cancer is said to be a very prevalent disease in Australia and is, relatively speaking,

more common in Australia than in England or European countries. Lawrence's experience has been that the number of cases coming under the heading of the epithelial triad (keratosis, rodent ulcer and epitheliomas) certainly suggests that this condition of skin cancer is quite a serious matter in Australia. The author writes the percentage of incidence: rodent ulcer, 6.28; keratosis, 4.38; and epitheliomas, 1.975, or a total percentage of 13.23. Lawrence, as others, believes that the relatively low humidity of the atmosphere in Australia probably favors the irritating effects of the solar rays in the production of keratoses, rodent ulcer and epithelioma. The humidity of the atmosphere of Australia is as low as 30, 40, 50, and 60 per cent for the greater portion of the continent and remains so for a large part of the year.

Causes and Treatment of Alopecia. R. Habermann, Deutsche med. Wshnschr. 54:1560 (Sept. 14) 1928.

The author states that in a large number of animals of various kinds, Habermann found that a preparation of cholesterol was more effective in promoting the growth of hair than petrolatum, with or without cholesterol, or dry massage. In some instances pure alcohol seemed to check hair growth. The loss of hair from thallium poisoning could be prevented by the cholesterol preparation. Applied with a soft brush, the effects of the treatment in thirty-five patients with alopecia seborrhica were highly favorable. The subjective symptoms disappeared, the production of scales and of sebum on the scalp diminished. In most cases there was also increased growth of hair. A distinct increase in the cholesterol content of the hair could be determined. In hair that was starting to turn gray, the amount of pigment was increased.

BOOK REVIEWS

Treatment in General Practice. By Harry Beckman, M.D., Professor of Pharmacology, Marquette University Medical School, Milwaukee, Wis. Octavo volume of 899 pages. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $10.00 net.

More than half a century ago the term "Therapeutic Nihilist" was coined. It applied to a schism in the medical profession who had little or no belief even in the proper administration of indicated drugs. Perhaps there was never in any profession a set of men so skeptical as to the effects of drugs, so self-poised and self-centered in their superior attitude as to the use of various drugs. So, relatively, we have had few volumes dealing strictly with medical practice and the treatment of medicine and border-line cases. The general practitioner has been neglected. It is believed that Dr. Beckman offers a very unusual and able aid to the general practitioner. The writer feels that this volume deserves a place in the library of each physician and surgeon.

The Surgical Clinics of North America. (Issued serially, one number every other month). Volume 9, number 6. (Lahey Clinic Number—December, 1929). 188 pages with 51 illustrations, and complete index to Volume 9. Per Clinic year (February, 1929 to December, 1929). Paper, $12.00; Cloth, $16.00. Philadelphia and London.

This is strictly a "Lahey" issue. Dr. Lahey stands today as one of the world's foremost exponents and directors of surgical problems. Of immediate interest to the surgeon this issue contains a few articles of profound interest to the surgeon. They are: "Vascular Depression of Spinal Anesthesia," "Clinical Impressions of Two New Anesthetics: Sodium Amytal and Avertin," by Lincoln F. Sise. "Choice of Anesthesia," by Lincoln F. Sise and P. D. Woodbridge. The contributions of Dr. Lahey consist of "Apathetic Thyroidism as Distinctive to Activating Thyroidism"; "Primary Hyperthyroidism in Children"; and "Notes on Appendicitis—Chronic and Acute."

Howard M. Clute presents an article on "Diagnosis of Substernal Goiter," and Robert L. Mason presents one on "The Control of the Blood Supply in Subtotal Thyroidectomy." This is a remarkably good issue of the various clinics.

Research and Medical Progress and Other Addresses, by J. Shelton Horsley, M. D., Attending Physician, St. Elizabeth Hospital, Richmond, Va. Cloth, 208 pages. Price $2.00. C. V. Mosby Company.

This volume is a collection of adresses delivered by one of the most active and able surgeons of the United States. The volume contains fifteen chapters, not only upon perplexing surgical problems but upon many problems affecting surgeons. It is an inspiration to read Dr. Horsley's statements upon surgical problems and upon the proper attitude of surgeons on surgical cases.

A Textbook on Orthopedic Surgery. By Willis C. Campbell, M.D., F.A.C.S., Professor of Orthopedic Surgery, University of Tennessee, College of Medicine, Memphis. Octavo volume of 705 pages, with 507 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $8.50.

During the last fifteen years Dr. Campbell has become one of the authorities on orthopedic surgery in the United States. His orthopedic service is a mecca for surgeons and patients afflicted with orthopedic conditions. Personally he is beloved and respected by hundreds of physicians who are acquainted with his earnest endeavors to better that most intractable set of conditions presented by the orthopedic patient.

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NARCOLEPSY FOLLOWING EPIDEMIC ENCEPHALITIS

Gordon R. Kamman, St. Paul (Journal A. M. A., July 6, 1929), reports a case of true symptomatic narcolepsy following an attack of acute epidemic encephalitis in which all forms of treatment have failed. The patient had an attack of "influenza" lasting for about five weeks, during which time she had headache and some fever, and was unusually drowsy during the day but could not sleep at night. She recovered from the acute attack—which in all probability was acute epidemic encephalitis—but since then has been troubled with diurnal attacks of involuntary sleep and periodic loss of muscular tone resulting from emotional stimulus. The patient complained of muscular stiffness, tremor of the hands, almost constant headache, extreme irritability, restlessness and insomnia. Neurologic examination revealed a moderate hypertonus of all the muscles, the right pupil slightly larger than the left, slight weakness of the right facial nerve, a fine tremor of both extended hands, some dysmetria of the right arm, and exaggeration of all deep tendon reflexes. Blood pressure, urinalysis and blood studies gave normal observations. The blood Wassermann reaction was negative. The patient has had about every conceivable form of treatment without avail. Diet, internal glandular therapy, sodium salicylate, belladonna, stramonium, acriflavine and various sedatives all have failed to give relief.

DIAGNOSIS OF EARLY UTERINE CANCER

Emil Novak, Baltimore (Journal A. M. A., March 16, 1929), stresses the fact that simple pelvic examination is not sufficient in making the diagnosis in many cancer cases. The physician should, in all suspicious cases, see that cancer is ruled out. This will mean biopsy in suspicious lesions of the cervix, diagnostic curettage in suspicious bleeding from the uterus. If early cancer of the cervix is found, the patient has at least a fifty-fifty chance for cure. If early adenocarcinoma of the uterus is found, her chances should be about two out of three. Any physician can diagnose late cancer, but physicians should familiarize themselves with the clinical appearance of early cancer and of cervical lesions that are to be regarded with suspicion. Even if proved benign, such lesions are important predisposing causes of cervical cancer, and their correction, usually very easy, does much to protect the patient from cancer. The danger of biopsy, if any exists, is far more than counterbalanced by the life-saving information it often yields. There is no other way of making the diagnosis in the early stages of the disease. The same statement may be made with regard to diagnostic curettage in suspicious bleeding of intra-uterine origin. Neither biopsy nor diagnostic curettage is of unqualified value, however, unless combined with competent pathologic examination. The ideal is of course, that the surgeon himself should be a good pathologist. Although there is much discussion of the bearing on cancer mortality of such factors as the method of treatment and the histologic classification of the tumer, the fact still remains that the most important single factor is the duration of the disease. Hence the basic importance of biopsy and diagnostic curettage which are essential in the recognition of the really early stage.

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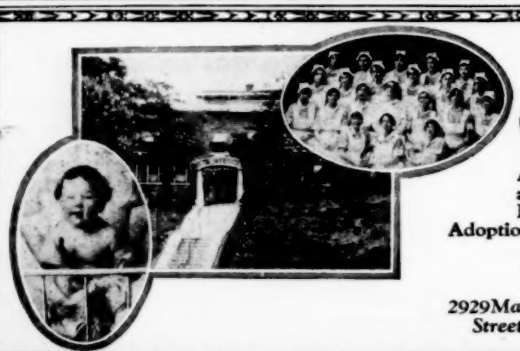

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Okmulgee	F. E. Sadler, Henryetta	M. B. Glismann, Okmulgee
Osage	W. H. Aaron, Pawhuska	M. E. Rust, Pawhuska
Ottawa	L. W. Troutt, Afton	J. W. Craig, Miami
Pawnee		
Payne	W. N. Davidson, Cushing	R. E. Roberts, Stillwater
Pittsburg	V. H. Barton, McAlester	F. L. Watson, McAlester
Pontotoc	O. E. Welborn, Ada	W. F. Dean, Ada
Pottawatomie	J. Elmer Hughes, Shawnee	W. M. Gallaher, Shawnee
Pushmataha	D. W. Connally, Clayton	John S. Lawson, Clayton
Rogers	W. S. Mason, Claremore	W. A. Howard, Chelsea
Seminole	T. A. Hill, Seminole	T. H. Briggs, Wewoka
Stephens	C. C. Richards, Marlow	W. S. Ivy, Duncan
Texas		R. B. Hayes, Guymon
Tillman		J. E. Childers, Tipton
Tulsa	J. F. Gorrell, Tulsa	Carl F. Simpson, Tulsa
Wagoner		
Washington	W. F. Kingman, Bartlesville	J. V. Athey, Bartlesville
Washita		C. B. Sullivan, Colony
Woods	I. S. Hunt, Freedom	O. E. Templin, Alva
Woodard		C. E. Williams, Woodward

NOTE—Corrections and additions to the above list will be cheerfully accepted.